<400> 4810

Met Ala Met Gln Met Gln Leu Glu Ala Asn Ala Asp Thr Ser Val Glu
1   5   10   15

Glu Glu Ser Phe Gly Pro Gln Pro Ile Ser Arg Leu Glu Gln Cys Gly
                20   25   30

Ile Asn Ala Asn Asp Val Lys Lys Leu Glu Glu Ala Gly Phe His Thr
            35   40   45

Val Glu Ala Val Ala Tyr Ala Pro Lys Lys Glu Leu Ile Asn Ile Lys
        50   55   60

Gly Ile Ser Glu Ala Lys Ala Asp Lys Ile Leu Thr Glu Ser Arg Ser
65   70   75   80

Val Ala Arg Leu Glu Cys Asn Ser Val Ile Leu Val Tyr Cys Thr Leu
                85   90   95

Arg Leu Ser Gly Ser Ser Asp Ser Pro Ala Ser Ala Ser Arg Val Val
                100   105   110

Gly Thr Thr Gly Gly Ile Glu Thr Gly Ser Ile Thr Glu Met Phe Gly
            115   120   125

Glu Phe Arg Thr Gly Lys Thr Gln Ile Cys His Thr Leu Ala Val Thr
    130   135   140

Cys Gln Leu Pro Ile Asp Arg Gly Gly Gly Glu Gly Lys Ala Met Tyr
145   150   155   160

Ile Asp Thr Glu Gly Thr Phe Arg Pro Glu Arg Leu Leu Ala Val Ala
                165   170   175

Glu Arg Tyr Gly Leu Ser Gly Ser Asp Val Leu Asp Asn Val Ala Tyr
                180   185   190

Ala Arg Ala Phe Asn Thr Asp His Gln Thr Gln Leu Leu Tyr Gln Ala
            195   200   205

Ser Ala Met Met Val Glu Ser Arg Tyr Ala Leu Leu Ile Val Asp Ser
    210   215   220

Ala Thr Ala Leu Tyr Arg Thr Asp Tyr Ser Gly Arg Gly Glu Leu Ser
225   230   235   240

Ala Arg Gln Met His Leu Ala Arg Phe Leu Arg Met Leu Leu Arg Leu
            245   250   255

Ala Asp Glu Phe Gly Val Ala Val Val Ile Thr Asn Gln Val Val Ala
            260   265   270

Gln Val Asp Gly Ala Ala Met Phe Ala Ala Asp Pro Lys Lys Pro Ile
       275   280   285

Gly Gly Asn Ile Ile Ala His Ala Ser Thr Thr Arg Leu Tyr Leu Arg
      290   295   300

Lys Gly Arg Gly Glu Thr Arg Ile Cys Lys Ile Tyr Asp Ser Pro Cys
305   310   315   320

Leu Pro Glu Ala Glu Ala Met Phe Ala Ile Asn Ala Asp Gly Val Gly
           325   330   335

Asp Ala Lys Asp
      340

<210> 4811

<211> 698

<212> PRT

<213> Homo sapiens

<400> 4811

Met Glu Thr Arg Gly Leu Ala Asp Ser Gly Gln Gly Ser Phe Thr Gly
1   5   10   15

Gln Gly Ile Ala Arg Phe Gly Arg Ile Gln Lys Lys Ser Gln Pro Glu
        20   25   30

Lys Val Val Arg Ala Ala Ser Arg Gly Arg Pro Leu Ile Gly Trp Thr
        35   40   45

Gln Trp Cys Ala Glu Asp Gly Gly Asp Glu Ser Glu Met Ala Leu Ala
      50   55   60

Gly Ser Pro Gly Cys Ser Ser Gly Pro Gln Gly Arg Leu Ser Arg Leu
65   70   75   80

Ile Phe Leu Leu Arg Arg Trp Ala Ala Arg His Val His His Gln Asp
          85   90   95

Gln Gly Pro Asp Ser Phe Pro Asp Arg Phe Arg Gly Ala Glu Leu Lys
        100   105   110

Glu Val Ser Ser Gln Glu Ser Asn Ala Gln Ala Asn Val Gly Ser Gln
        115   120   125

Glu Pro Ala Asp Arg Gly Arg Ser Ala Trp Pro Leu Ala Lys Cys Asn
      130   135   140

Thr Asn Thr Ser Asn Asn Thr Glu Glu Glu Lys Lys Thr Lys Lys Lys
145   150   155   160

Asp Ala Ile Val Val Asp Pro Ser Ser Asn Leu Tyr Tyr Arg Trp Leu
                165   170   175

Thr Ala Ile Ala Leu Pro Val Phe His Asn Trp Tyr Leu Leu Ile Cys
                180   185   190

Arg Ala Cys Phe Asp Glu Leu Gln Ser Glu Tyr Leu Met Leu Trp Leu
                195   200   205

Val Leu Asp Tyr Ser Ala Asp Val Leu Tyr Val Leu Asp Val Leu Val
                210   215   220

Arg Ala Arg Thr Gly Phe Leu Glu Gln Gly Leu Met Val Ser Asp Thr
225   230   235   240

Asn Arg Leu Trp Gln His Tyr Lys Thr Thr Thr Gln Phe Lys Leu Asp
                245   250   255

Val Leu Ser Leu Val Pro Thr Asp Leu Ala Tyr Leu Lys Val Gly Thr
                260   265   270

Asn Tyr Pro Glu Val Arg Phe Asn Arg Leu Leu Lys Phe Ser Arg Leu
                275   280   285

Phe Glu Phe Phe Asp Arg Thr Glu Thr Arg Thr Asn Tyr Pro Asn Met
                290   295   300

Phe Arg Ile Gly Asn Leu Val Leu Tyr Ile Leu Ile Ile Ile His Trp
305   310   315   320

Asn Ala Cys Ile Tyr Phe Ala Ile Ser Lys Phe Ile Gly Phe Gly Thr
                325   330   335

Asp Ser Trp Val Tyr Pro Asn Ile Ser Ile Pro Glu His Gly Arg Leu
                340   345   350

Ser Arg Lys Tyr Ile Tyr Ser Leu Tyr Trp Ser Thr Leu Thr Leu Thr
                355   360   365

Thr Ile Gly Glu Thr Pro Pro Pro Val Lys Asp Glu Glu Tyr Leu Phe
                370   375   380

Val Val Val Asp Phe Leu Val Gly Val Leu Ile Phe Ala Thr Ile Val
385   390   395   400

Gly Asn Val Gly Ser Met Ile Ser Asn Met Asn Ala Ser Arg Ala Glu
                405   410   415

Phe Gln Ala Lys Ile Asp Ser Ile Lys Gln Tyr Met Gln Phe Arg Lys
                420   425   430

Val Thr Lys Asp Leu Glu Thr Arg Val Ile Arg Trp Phe Asp Tyr Leu
        435   440   445

Trp Ala Asn Lys Lys Thr Val Asp Glu Lys Glu Val Leu Lys Ser Leu
        450   455   460

Pro Asp Lys Leu Lys Ala Glu Ile Ala Ile Asn Val His Leu Asp Thr
465   470   475   480

Leu Lys Lys Val Arg Ile Phe Gln Asp Cys Glu Ala Gly Leu Leu Val
                485   490   495

Glu Leu Val Leu Lys Leu Arg Pro Thr Val Phe Ser Pro Gly Asp Tyr
        500   505   510

Ile Cys Lys Lys Gly Asp Ile Gly Lys Glu Met Tyr Ile Ile Asn Glu
        515   520   525

Gly Lys Leu Ala Val Val Ala Asp Asp Gly Val Thr Gln Phe Val Val
        530   535   540

Leu Ser Asp Gly Ser Tyr Phe Gly Glu Ile Ser Ile Leu Asn Ile Lys
545   550   555   560

Gly Ser Lys Ser Gly Asn Arg Arg Thr Ala Asn Ile Arg Ser Ile Gly
                565   570   575

Tyr Ser Asp Leu Phe Cys Leu Ser Lys Asp Asp Leu Met Glu Ala Leu
                580   585   590

Thr Glu Tyr Pro Glu Ala Lys Lys Ala Leu Glu Glu Lys Gly Arg Gln
        595   600   605

Ile Leu Met Lys Asp Asn Leu Ile Asp Glu Glu Leu Ala Arg Ala Gly
        610   615   620

Ala Asp Pro Lys Asp Leu Glu Glu Lys Val Glu Gln Leu Gly Ser Ser
625   630   635   640

Leu Asp Thr Leu Gln Thr Arg Phe Ala Arg Leu Leu Ala Glu Tyr Asn
                645   650   655

Ala Thr Gln Met Lys Met Lys Gln Arg Leu Ser Gln Leu Glu Ser Gln
                660   665   670

Val Lys Gly Gly Gly Asp Lys Pro Leu Ala Asp Gly Glu Val Pro Gly

        675   680   685

Asp Ala Thr Lys Thr Glu Asp Lys Gln Gln
        690   695

<210> 4812

<211> 544

<212> PRT

<213> Homo sapiens

<400> 4812

```
Met Asp Gly Leu Asp Asn Arg Gly Glu Ile Val Val Ile Gly Ala Thr
 1               5                   10                  15

Asn Arg Leu Asp Ser Ile Asp Pro Ala Leu Arg Arg Pro Gly Arg Phe
            20                  25                  30

Asp Arg Glu Phe Leu Phe Asn Leu Pro Asp Gln Lys Ala Arg Lys His
        35                  40                  45

Ile Leu Gln Ile His Thr Arg Asp Trp Asn Pro Lys Leu Ser Asp Ala
    50                  55                  60

Phe Leu Gly Glu Leu Ala Glu Lys Cys Val Gly Tyr Cys Gly Ala Asp
65                  70                  75                  80

Ile Lys Ala Leu Cys Thr Glu Ala Ala Leu Ile Ala Leu Arg Arg Arg
                85                  90                  95

Tyr Pro Gln Ile Tyr Ala Ser Ser His Lys Leu Gln Leu Asp Val Ser
                100                 105                 110

Ser Ile Val Leu Ser Ala Gln Asp Phe Tyr His Ala Met Gln Asn Ile
            115                 120                 125

Val Pro Ala Ser Gln Arg Ala Val Met Ser Ser Gly His Ala Leu Ser
    130                 135                 140

Pro Ile Ile Arg Pro Leu Leu Glu Arg Ser Phe Asn Asn Ile Leu Ala
145                 150                 155                 160

Val Leu Gln Lys Val Phe Pro His Ala Glu Ile Ser Gln Ser Asp Lys
                165                 170                 175

Lys Glu Asp Ile Glu Thr Leu Ile Leu Glu Asp Ser Glu Asp Glu Asn
                180                 185                 190

Ala Leu Ser Ile Phe Glu Thr Asn Cys His Ser Gly Ser Pro Lys Lys
            195                 200                 205

Gln Ser Ser Ser Ala Ala Ile His Lys Pro Tyr Leu His Phe Thr Met
    210                 215                 220

Ser Pro Tyr His Gln Pro Thr Ser Tyr Arg Pro Arg Leu Leu Leu Ser
```

```
              225                    230                    235                    240
Gly Glu Arg Gly Ser Gly Gln Thr Ser His Leu Ala Pro Ala Leu Leu
                         245                    250                    255
His Thr Leu Glu Arg Phe Ser Val His Arg Leu Asp Leu Pro Ala Leu
                         260                    265                    270
Tyr Ser Val Ser Ala Lys Thr Pro Glu Glu Ser Cys Ala Gln Ile Phe
                     275                    280                    285
Arg Glu Ala Arg Arg Thr Val Pro Ser Ile Val Tyr Met Pro His Ile
        290                    295                    300
Gly Asp Trp Trp Glu Ala Val Ser Glu Thr Val Arg Ala Thr Phe Leu
305                    310                    315                    320
Thr Leu Leu Gln Asp Ile Pro Ser Phe Ser Pro Ile Phe Leu Leu Ser
                     325                    330                    335
Thr Ser Glu Thr Met Tyr Ser Glu Leu Pro Glu Glu Val Lys Cys Ile
                     340                    345                    350
Phe Arg Ile Gln Tyr Glu Glu Val Leu Tyr Ile Gln Arg Pro Ile Glu
                 355                    360                    365
Glu Asp Arg Arg Lys Phe Phe Gln Glu Leu Ile Leu Asn Gln Ala Ser
        370                    375                    380
Met Ala Pro Pro Arg Arg Lys His Ala Ala Leu Cys Ala Met Glu Val
385                    390                    395                    400
Leu Pro Leu Ala Leu Pro Ser Pro Pro Arg Gln Leu Ser Glu Ser Glu
                     405                    410                    415
Lys Ser Arg Met Glu Asp Gln Glu Glu Asn Thr Leu Arg Glu Leu Arg
                 420                    425                    430
Leu Phe Leu Arg Asp Val Thr Lys Arg Leu Ala Thr Asp Lys Arg Phe
             435                    440                    445
Asn Ile Phe Ser Lys Pro Val Asp Ile Glu Glu Val Ser Asp Tyr Leu
        450                    455                    460
Glu Val Ile Lys Glu Pro Met Asp Leu Ser Thr Val Ile Thr Lys Ile
465                    470                    475                    480
Asp Lys His Asn Tyr Leu Thr Ala Lys Asp Phe Leu Lys Asp Ile Asp
                     485                    490                    495
Leu Ile Cys Ser Asn Ala Leu Glu Tyr Asn Pro Asp Lys Asp Pro Gly
                 500                    505                    510
Asp Lys Ile Ile Arg His Arg Ala Cys Thr Leu Lys Asp Thr Ala His
```

<div align="center">

515   520   525
</div>

Ala Ile Ile Ala Ala Glu Leu Asp Pro Glu Phe Asn Lys Leu Cys Glu
     530   535   540

<210> 4813
<211> 334
<212> PRT
<213> Homo sapiens

<400> 4813
Met Val Gly Gln Gly Cys Ser Leu Glu Pro Arg Leu Asp Leu Arg Pro
 1   5   10   15
Leu Gly Asn Pro Arg Ser Lys Gln Ser Arg His Gln Ser Trp Val Trp
              20   25   30
Glu Arg Gln Glu Gly Glu Arg Asn Gly Gly Ser Lys Glu Gly Lys Glu
           35   40   45
Gly Gly Arg Gly Gly Ser Lys Thr Val Ile Pro Ile Pro Ile Ser Asp
        50   55   60
Leu Glu Leu Ala Ser Thr Pro Val His Pro Cys Arg Gly Gly Pro Ser
65   70   75   80
Pro Gln Leu Leu Pro Arg Glu Tyr Gly Gly Gly Val Gly Ile Leu Trp
                   85   90   95
Leu Ser Ser Leu Pro Leu Leu Cys Arg Leu Met Leu Gly Phe Met Gly
              100   105   110
Val Thr Ala Leu Leu Ser Met Trp Ile Ser Asn Thr Ala Thr Thr Ala
           115   120   125
Met Met Val Pro Ile Val Glu Ala Ile Leu Gln Gln Met Glu Ala Thr
        130   135   140
Ser Ala Ala Thr Glu Ala Gly Leu Glu Leu Val Asp Lys Gly Lys Ala
145   150   155   160
Lys Glu Leu Pro Gly Ser Gln Val Ile Phe Glu Gly Pro Thr Leu Gly
                   165   170   175
Gln Gln Glu Asp Gln Glu Arg Lys Arg Leu Cys Lys Ala Met Thr Leu
              180   185   190
Cys Ile Cys Tyr Ala Ala Ser Ile Gly Gly Thr Ala Thr Leu Thr Gly

```
              195                    200                    205
Thr Gly Pro Asn Val Val Leu Leu Gly Gln Met Asn Glu Leu Phe Pro
        210                    215                    220
Asp Ser Lys Asp Leu Val Asn Phe Ala Ser Trp Phe Ala Phe Ala Phe
225                    230                    235                    240
Pro Asn Met Leu Val Met Leu Leu Phe Ala Trp Leu Trp Leu Gln Phe
                    245                    250                    255
Val Tyr Met Arg Phe Asn Phe Lys Lys Ser Trp Gly Cys Gly Leu Glu
                260                    265                    270
Ser Lys Lys Asn Glu Lys Ala Ala Leu Lys Val Leu Gln Glu Glu Tyr
                275                    280                    285
Arg Lys Leu Gly Pro Leu Ser Phe Ala Glu Ile Asn Val Leu Ile Cys
        290                    295                    300
Phe Phe Leu Leu Val Ile Leu Trp Phe Ser Arg Asp Pro Gly Phe Met
305                    310                    315                    320
Pro Gly Trp Leu Thr Val Ala Trp Val Glu Gly Glu Thr Lys
                    325                    330
```

```
<210> 4814

<211> 451

<212> PRT

<213> Homo sapiens


<400> 4814

Met Asn Lys Ala Pro Gln Ser Thr Gly Pro Pro Pro Ala Pro Ser Pro
1                    5                    10                    15
Gly Leu Pro Gln Pro Ala Phe Pro Pro Gly Gln Thr Ala Pro Val Val
                20                    25                    30
Phe Ser Thr Pro Gln Ala Thr Gln Met Asn Thr Pro Ser Gln Pro Arg
            35                    40                    45
Gln His Phe Tyr Pro Ser Arg Ala Gln Pro Pro Ser Ser Ala Ala Ser
        50                    55                    60
Arg Val Gln Ser Ala Ala Pro Ala Arg Pro Gly Pro Ala Ala Leu Pro
65                    70                    75                    80
Pro Val Ser Pro Leu Lys Ala Ala Leu Ser Glu Glu Glu Leu Glu Lys
```

```
                    85                      90                      95
Lys Ser Lys Ala Ile Ile Glu Glu Tyr Leu His Leu Asn Asp Met Lys
                   100                     105                     110
Glu Ala Val Gln Cys Val Gln Glu Leu Ala Ser Pro Ser Leu Leu Phe
                   115                     120                     125
Ile Phe Val Arg His Gly Val Glu Ser Thr Leu Glu Arg Ser Ala Ile
              130                     135                     140
Ala Arg Glu His Met Gly Gln Leu Leu His Gln Leu Leu Cys Ala Gly
         145                     150                     155                160
His Leu Ser Thr Ala Gln Tyr Tyr Gln Gly Leu Tyr Glu Ile Leu Glu
                   165                     170                     175
Leu Ala Glu Asp Met Glu Ile Asp Ile Pro His Val Trp Leu Tyr Leu
                   180                     185                     190
Ala Glu Leu Val Thr Pro Ile Leu Gln Glu Gly Gly Val Pro Met Gly
                   195                     200                     205
Glu Leu Phe Arg Glu Ile Thr Lys Pro Leu Arg Pro Leu Gly Lys Ala
              210                     215                     220
Ala Ser Leu Leu Leu Glu Ile Leu Gly Leu Leu Cys Lys Ser Met Gly
         225                     230                     235                240
Pro Lys Lys Val Gly Thr Leu Trp Arg Glu Ala Gly Leu Ser Trp Lys
                   245                     250                     255
Glu Phe Leu Pro Glu Gly Gln Asp Ile Gly Ala Phe Val Ala Glu Gln
                   260                     265                     270
Lys Val Glu Tyr Thr Leu Gly Glu Glu Ser Glu Ala Pro Gly Gln Arg
              275                     280                     285
Ala Leu Pro Ser Glu Glu Leu Asn Arg Gln Leu Glu Lys Leu Leu Lys
         290                     295                     300
Glu Gly Ser Ser Asn Gln Arg Val Phe Asp Trp Ile Glu Ala Asn Leu
    305                     310                     315                320
Ser Glu Gln Gln Ile Val Ser Asn Thr Leu Val Arg Ala Leu Met Thr
                   325                     330                     335
Ala Val Cys Tyr Ser Ala Ile Ile Phe Glu Thr Pro Leu Arg Val Asp
              340                     345                     350
Val Ala Val Leu Lys Ala Arg Ala Lys Leu Leu Gln Lys Tyr Leu Cys
         355                     360                     365
Asp Glu Gln Lys Glu Leu Gln Ala Leu Tyr Ala Leu Gln Ala Leu Val
```

```
            370                     375                     380
Val Thr Leu Glu Gln Pro Pro Asn Leu Leu Arg Met Phe Phe Asp Ala
385                     390                     395                     400
Leu Tyr Asp Glu Asp Val Val Lys Glu Asp Ala Phe Tyr Ser Trp Glu
                    405                     410                     415
Ser Ser Lys Asp Pro Ala Glu Gln Gln Gly Lys Gly Val Ala Leu Lys
                    420                     425                     430
Ser Val Thr Ala Phe Phe Lys Trp Leu Arg Glu Ala Glu Glu Glu Ser
                    435                     440                     445
Asp His Asn
        450
```

<210> 4815

<211> 694

<212> PRT

<213> Homo sapiens

<400> 4815

```
Met Glu Arg Ala Met Glu Gln Leu Asn Arg Leu Thr Arg Ser Leu Arg
 1               5                       10                      15
Arg Ala Arg Thr Val Glu Leu Pro Glu Asp Asn Glu Thr Ala Val Tyr
                20                      25                      30
Thr Leu Met Pro Met Val Met Ala Asp Gln His Arg Ser Val Ser Glu
                35                      40                      45
Leu Leu Ser Asn Ser Lys Phe Asp Val Asn Tyr Ala Phe Gly Arg Val
        50                      55                      60
Lys Arg Ser Leu Leu His Ile Ala Ala Asn Cys Gly Ser Val Glu Cys
65                      70                      75                      80
Leu Val Leu Leu Leu Lys Lys Gly Ala Asn Pro Asn Tyr Gln Asp Ile
                    85                      90                      95
Ser Gly Cys Thr Pro Leu His Leu Ala Ala Arg Asn Gly Gln Lys Lys
                    100                     105                     110
Cys Met Ser Lys Leu Leu Glu Tyr Ser Ala Asp Val Asn Ile Cys Asn
                    115                     120                     125
Asn Glu Gly Pro Thr Ala Ile His Trp Leu Ala Val Asn Gly Arg Thr
```

```
                130                       135                       140
Glu Leu Leu His Asp Leu Val Gln His Val Ser Asp Val Asp Val Glu
145                      150                       155                       160
Asp Ala Met Gly Gln Thr Ala Leu His Val Ala Cys Gln Asn Gly His
                      165                       170                       175
Lys Thr Thr Val Gln Cys Leu Leu Asp Ser Gly Ala Asp Ile Asn Arg
                      180                       185                       190
Pro Asn Val Ser Gly Ala Thr Pro Leu Tyr Phe Ala Cys Ser His Gly
                      195                       200                       205
Gln Arg Asp Thr Ala Gln Ile Leu Leu Leu Arg Gly Ala Lys Tyr Leu
                      210                       215                       220
Pro Asp Lys Asn Gly Val Thr Pro Leu Asp Leu Cys Val Gln Gly Gly
225                      230                       235                       240
Tyr Gly Glu Thr Cys Glu Val Leu Ile Gln Tyr His Pro Arg Leu Phe
                      245                       250                       255
Gln Thr Ile Ile Gln Met Thr Gln Asn Glu Asp Leu Arg Glu Asn Met
                      260                       265                       270
Leu Arg Gln Val Leu Glu His Leu Ser Gln Gln Ser Glu Ser Gln Tyr
                      275                       280                       285
Leu Lys Ile Leu Thr Ser Leu Ala Glu Val Ser Thr Thr Asn Gly His
                      290                       295                       300
Lys Leu Leu Ser Leu Ser Ser Asn Tyr Asp Ala Gln Met Lys Ser Leu
305                      310                       315                       320
Leu Arg Ile Val Arg Met Phe Cys His Val Phe Arg Ile Gly Pro Ser
                      325                       330                       335
Ser Pro Ser Asn Gly Ile Asp Met Gly Tyr Asn Gly Asn Lys Thr Pro
                      340                       345                       350
Arg Ser Gln Val Phe Lys Pro Leu Glu Leu Leu Trp His Ser Leu Asp
                      355                       360                       365
Glu Trp Leu Val Leu Ile Ala Thr Glu Leu Met Lys Asn Lys Arg Asp
                      370                       375                       380
Ser Thr Glu Ile Thr Ser Ile Leu Leu Lys Gln Lys Gly Gln Asp Gln
385                      390                       395                       400
Asp Ala Ala Ser Ile Pro Pro Phe Glu Pro Pro Gly Pro Gly Ser Tyr
                      405                       410                       415
Glu Asn Leu Ser Thr Gly Thr Arg Glu Ser Lys Pro Asp Ala Leu Ala
```

```
                    420                      425                      430
Gly Arg Gln Glu Ala Ser Ala Asp Cys Gln Asp Val Ile Ser Met Thr
            435                      440                      445
Ala Asn Arg Leu Ser Ala Val Ile Gln Ala Phe Tyr Met Cys Cys Ser
        450                      455                      460
Cys Gln Met Pro Pro Gly Met Thr Ser Pro Arg Phe Ile Glu Phe Val
465                      470                      475                      480
Cys Lys His Asp Glu Val Leu Lys Cys Phe Val Asn Arg Asn Pro Lys
                    485                      490                      495
Ile Ile Phe Asp His Phe His Phe Leu Leu Glu Cys Pro Glu Leu Met
                500                      505                      510
Ser Arg Phe Met His Ile Ile Lys Ala Gln Ala Glu Tyr Val Gln Leu
            515                      520                      525
Val Thr Glu Leu Arg Met Thr Arg Ala Ile Gln Pro Gln Ile Asn Ala
        530                      535                      540
Phe Leu Gln Gly Phe His Met Phe Ile Pro Pro Ser Leu Ile Gln Leu
545                      550                      555                      560
Phe Asp Glu Tyr Glu Leu Glu Leu Leu Leu Ser Gly Met Pro Glu Ile
                565                      570                      575
Asp Val Ser Asp Trp Ile Lys Asn Thr Glu Tyr Thr Ser Gly Tyr Glu
                580                      585                      590
Arg Glu Asp Pro Val Ile Gln Trp Phe Trp Glu Val Val Glu Asp Ile
            595                      600                      605
Thr Gln Glu Glu Arg Val Leu Leu Leu Gln Phe Val Thr Gly Ser Ser
        610                      615                      620
Arg Val Pro His Gly Gly Phe Ala Asn Ile Met Gly Gly Ser Gly Leu
625                      630                      635                      640
Gln Asn Phe Thr Ile Ala Ala Val Pro Tyr Thr Pro Asn Leu Leu Pro
                645                      650                      655
Thr Ser Ser Thr Cys Ile Asn Met Leu Lys Leu Pro Glu Tyr Pro Ser
                660                      665                      670
Lys Glu Ile Leu Lys Asp Arg Leu Leu Val Ala Leu His Cys Gly Ser
            675                      680                      685
Tyr Gly Tyr Thr Met Ala
            690
```

<210> 4816

<211> 649

<212> PRT

<213> Homo sapiens

<400> 4816

Met Pro Lys Ala Glu Ala Asn Leu Gly Gly Leu Ser Ser Leu Val Val
1   5   10   15

Asn Thr Pro Ile Thr Ser Val Ser Leu Ser His Ser Ser Ser Glu Ser
                20   25   30

Ser Lys Met Ser Glu Ser Lys Asp Gln Glu Asn Asn Cys Glu Arg Pro
            35   40   45

Lys Glu Ser Asn Val Leu His Pro Asn Gly Glu Cys Pro Val Lys Ser
        50   55   60

Glu Pro Thr Glu Pro Gly Asp Glu Asp Glu Glu Asp Ala Tyr Ser Asn
65   70   75   80

Glu Leu Asp Asp Glu Glu Val Leu Gly Glu Leu Thr Asp Ser Ile Gly
                85   90   95

Asn Lys Asp Phe Pro Leu Leu Asn Gln Ser Ile Ser Pro Leu Ser Ser
                100   105   110

Ser Val Leu Lys Phe Ile Glu Lys Gly Thr Ser Ser Ser Ser Ala Thr
                115   120   125

Val Ser Asp Asp Thr Glu Lys Lys Lys Gln Thr Ala Ala Val Arg Ala
        130   135   140

Ser Gly Ser Val Ala Ser Asn Tyr Gly Ile Ser Gly Lys Asp Phe Ala
145   150   155   160

Asp Ala Ser Ala Ser Lys Asp Ser Ala Thr Ala Ala His Pro Ser Glu
                165   170   175

Ile Ala Arg Gly Asp Glu Asp Ser Ser Ala Thr Pro His Gln His Gly
                180   185   190

Phe Thr Pro Ser Thr Pro Gly Thr Pro Gly Pro Gly Gly Asp Gly Ser
                195   200   205

Pro Gly Ser Gly Ile Glu Cys Pro Lys Cys Asp Thr Val Leu Gly Ser
        210   215   220

Ser Arg Ser Leu Gly Gly His Met Thr Met Met His Ser Arg Asn Ser

225   230   235   240

Cys Lys Thr Leu Lys Cys Pro Lys Cys Asn Trp His Tyr Lys Tyr Gln
      245   250   255

Gln Thr Leu Glu Ala His Met Lys Glu Lys His Pro Glu Pro Gly Gly
     260   265   270

Ser Cys Val Tyr Cys Lys Thr Gly Gln Pro His Pro Arg Leu Ala Arg
    275   280   285

Gly Glu Ser Tyr Thr Cys Gly Tyr Lys Pro Phe Arg Cys Glu Val Cys
   290   295   300

Asn Tyr Ser Thr Thr Thr Lys Gly Asn Leu Ser Ile His Met Gln Ser
305   310   315   320

Asp Lys His Leu Asn Asn Val Gln Asn Leu Gln Asn Gly Asn Gly Glu
     325   330   335

Gln Val Phe Gly His Ser Ala Pro Ala Pro Asn Thr Ser Leu Ser Gly
     340   345   350

Cys Gly Thr Pro Ser Pro Ser Lys Pro Lys Gln Lys Pro Thr Trp Arg
     355   360   365

Cys Glu Val Cys Asp Tyr Glu Thr Asn Val Ala Arg Asn Leu Arg Ile
     370   375   380

His Met Thr Ser Glu Lys His Met His Asn Met Met Leu Leu Gln Gln
385   390   395   400

Asn Met Lys Gln Ile Gln His Asn Leu His Leu Gly Leu Ala Pro Ala
     405   410   415

Glu Ala Glu Leu Tyr Gln Tyr Tyr Leu Ala Gln Asn Ile Gly Leu Thr
     420   425   430

Gly Met Lys Leu Glu Asn Pro Ala Asp Pro Gln Leu Met Ile Asn Pro
     435   440   445

Phe Gln Leu Asp Pro Ala Thr Ala Ala Ala Leu Ala Pro Gly Leu Gly
     450   455   460

Glu Leu Ser Pro Tyr Ile Ser Asp Pro Ala Leu Lys Leu Phe Gln Cys
465   470   475   480

Ala Val Cys Asn Lys Phe Thr Ser Asp Ser Leu Glu Ala Leu Ser Val
     485   490   495

His Val Ser Ser Glu Arg Ser Leu Pro Glu Glu Glu Trp Arg Ala Val
     500   505   510

Ile Gly Asp Ile Tyr Gln Cys Lys Leu Cys Asn Tyr Asn Thr Gln Leu

```
            515                  520                  525
Lys Ala Asn Phe Gln Leu His Cys Glu Thr Asp Lys His Met Gln Lys
        530                  535                  540
Tyr Gln Leu Val Ala His Ile Lys Glu Gly Gly Lys Ser Asn Glu Trp
545                  550                  555                  560
Arg Leu Lys Cys Ile Ala Ile Gly Asn Pro Val His Leu Lys Cys Asn
                565                  570                  575
Ala Cys Asp Tyr Tyr Thr Asn Ser Val Asp Lys Leu Arg Leu His Thr
            580                  585                  590
Thr Asn His Arg His Glu Ala Ala Leu Lys Leu Tyr Lys Val Ser Ser
        595                  600                  605
Asp Ile His Phe Arg Trp His Arg Val Glu Lys Gly Ile Asn Ser Phe
        610                  615                  620
Arg Ala Trp Ser Thr Ser Leu Gln Leu Lys Glu Lys Lys Arg Glu Lys
625                  630                  635                  640
Thr Ser Lys Gly Arg Gly His Ser Phe
                645
```

<210> 4817

<211> 808

<212> PRT

<213> Homo sapiens

<400> 4817

```
Met Leu Glu Gly His Glu Ser Tyr Asp Thr Glu Asn Phe Tyr Phe Arg
  1               5                  10                  15
Glu Ile Arg Lys Asn Leu Gln Glu Val Asp Phe Gln Trp Lys Asp Gly
            20                  25                  30
Glu Ile Asn Tyr Lys Glu Gly Pro Met Thr His Lys Asn Asn Leu Thr
        35                  40                  45
Gly Gln Arg Val Arg His Ser Gln Gly Asp Val Glu Asn Lys His Met
        50                  55                  60
Glu Asn Gln Leu Ile Leu Arg Phe Gln Ser Gly Leu Gly Glu Leu Gln
65                  70                  75                  80
Lys Phe Gln Thr Ala Glu Lys Ile Tyr Gly Cys Asn Gln Ile Glu Arg
```

```
                    85                    90                    95
Thr Val Asn Asn Cys Phe Leu Ala Ser Pro Leu Gln Arg Ile Phe Pro
                    100                   105                   110
Gly Val Gln Thr Asn Ile Ser Arg Lys Tyr Gly Asn Asp Phe Leu Gln
                    115                   120                   125
Leu Ser Leu Pro Thr Gln Asp Glu Lys Thr His Ile Arg Glu Lys Pro
                130                   135                   140
Tyr Ile Gly Asn Glu Cys Gly Lys Ala Phe Arg Val Ser Ser Ser Leu
145                   150                   155                   160
Ile Asn His Gln Met Ile His Thr Thr Glu Lys Pro Tyr Arg Cys Asn
                    165                   170                   175
Glu Ser Gly Lys Ala Phe His Arg Gly Ser Leu Leu Thr Val His Gln
                    180                   185                   190
Ile Val His Thr Arg Gly Lys Pro Tyr Gln Cys Asp Val Cys Gly Arg
                    195                   200                   205
Ile Phe Arg Gln Asn Ser Asp Leu Val Asn His Arg Arg Ser His Thr
                210                   215                   220
Gly Asp Lys Pro Tyr Ile Cys Asn Glu Cys Gly Lys Ser Phe Ser Lys
225                   230                   235                   240
Ser Ser His Leu Ala Val His Gln Arg Ile His Thr Gly Glu Lys Pro
                    245                   250                   255
Tyr Lys Cys Asn Arg Cys Gly Lys Cys Phe Ser Gln Ser Ser Ser Leu
                    260                   265                   270
Ala Thr His Gln Thr Val His Thr Gly Asp Lys Pro Tyr Lys Cys Asn
                    275                   280                   285
Glu Cys Gly Lys Thr Phe Lys Arg Asn Ser Ser Leu Thr Ala His His
                290                   295                   300
Ile Ile His Ala Gly Lys Lys Pro Tyr Thr Cys Asp Val Cys Gly Lys
305                   310                   315                   320
Val Phe Tyr Gln Asn Ser Gln Leu Val Arg His Gln Ile Ile His Thr
                    325                   330                   335
Gly Glu Thr Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Phe Gln

                    340                   345                   350
Arg Ser Arg Leu Ala Gly His Arg Arg Ile His Thr Gly Glu Lys Pro
                    355                   360                   365
```

Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Ser Gln His Ser His Leu
   370   375   380

Ala Val His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
385   390   395   400

Glu Cys Gly Lys Ala Phe Asn Trp Gly Ser Leu Leu Thr Val His Gln
            405   410   415

Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Val Cys Gly Lys
            420   425   430

Val Phe Asn Tyr Gly Gly Tyr Leu Ser Val His Met Arg Cys His Thr
            435   440   445

Gly Glu Lys Pro Leu His Cys Asn Lys Cys Gly Met Val Phe Thr Tyr
            450   455   460

Tyr Ser Cys Leu Ala Arg His Gln Arg Met His Thr Gly Glu Lys Pro
465   470   475   480

Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Ile Asp Ser Gly Asn Leu
            485   490   495

Ser Ile His Arg Arg Ser His Thr Gly Glu Lys Pro Phe Gln Cys Asn
            500   505   510

Glu Cys Gly Lys Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His Arg
            515   520   525

Lys Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly Lys
            530   535   540

Ala Tyr Thr Gln Arg Ser Ser Leu Thr Lys His Leu Val Ile His Thr
545   550   555   560

Gly Glu Asn Pro Tyr His Cys Asn Glu Phe Gly Glu Ala Phe Ile Gln
            565   570   575

Ser Ser Lys Leu Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys Pro
            580   585   590

His Lys Cys Ser Glu Cys Gly Arg Thr Phe Ser His Lys Thr Ser Leu
            595   600   605

Val Tyr His Gln Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys Ile
            610   615   620

Glu Cys Gly Lys Val Phe Asn Ser Thr Thr Thr Leu Ala Arg His Arg
625   630   635   640

Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
            645   650   655

Val Phe Arg Tyr Arg Ser Gly Leu Ala Arg His Trp Ser Ile His Thr
            660   665   670

Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Arg Val
            675   680   685

Arg Ser Ile Leu Leu Asn His Gln Met Met His Thr Gly Glu Lys Pro
        690   695   700

Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ile Glu Arg Ser Asn Leu
705   710   715   720

Val Tyr His Gln Arg Asn His Thr Gly Glu Lys Pro Tyr Lys Cys Met
                725   730   735

Glu Cys Gly Lys Ala Phe Gly Arg Arg Ser Cys Leu Thr Lys His Gln
            740   745   750

Arg Ile His Ser Ser Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
            755   760   765

Ser Tyr Ile Ser Arg Ser Gly Leu Thr Lys His Gln Ile Lys His Ala
        770   775   780

Gly Glu Asn Leu Thr Thr Lys Leu Asn Val Glu Arg Pro Leu Asp Val
785   790   795   800

Val Leu Thr Ser Gly Ile Pro Lys
                805

<210> 4818

<211> 602

<212> PRT

<213> Homo sapiens

<400> 4818

Met Ile Gln Ser Gly Lys Gly Ala Asp Pro Pro Asp Lys Lys Asp Met
1   5   10   15

Lys Leu Ser Thr Ala Thr Asn Pro Gln Asn Gly Leu Ser Gln Ile Leu
            20   25   30

Arg Leu Val Leu Gln Glu Leu Ser Leu Phe Tyr Ser Arg Asp Val Asn
        35   40   45

Gly Val Cys Leu Leu Tyr Asp Leu Leu His Ser Pro Trp Leu Gln Ala
        50   55   60

Leu Leu Lys Ile Tyr Asp Cys Leu Gln Glu Phe Lys Glu Lys Lys Leu
65   70   75   80

Val Pro Ala Thr Pro His Ala Gln Val Leu Ser Tyr Glu Val Val Glu
                85   90   95

Leu Leu Arg Glu Thr Pro Thr Ser Pro Glu Ile Gln Glu Leu Arg Gln
              100   105   110

Met Leu Gln Ala Pro His Phe Lys Gly Ala Thr Ile Lys Arg His Glu
              115   120   125

Met Thr Gly Asp Ile Leu Val Ala Arg Ile Ile His Gly Gly Leu Ala
            130   135   140

Glu Arg Ser Gly Leu Leu Tyr Ala Gly Asp Lys Leu Val Glu Val Asn
145   150   155   160

Gly Val Ser Val Glu Gly Leu Asp Pro Glu Gln Val Ile His Ile Leu
                165   170   175

Ala Met Ser Arg Gly Thr Ile Met Phe Lys Val Val Pro Val Ser Asp
              180   185   190

Pro Pro Val Asn Ser Gln Gln Met Val Tyr Val Arg Ala Met Thr Glu
              195   200   205

Tyr Trp Pro Gln Glu Asp Pro Asp Ile Pro Cys Met Asp Ala Gly Leu
    210   215   220

Pro Phe Gln Lys Gly Asp Ile Leu Gln Ile Val Asp Gln Asn Asp Ala
225   230   235   240

Leu Trp Trp Gln Ala Arg Lys Ile Ser Asp Pro Ala Thr Cys Ala Gly
                245   250   255

Leu Val Pro Ser Asn His Leu Leu Lys Arg Trp Ser Phe Ala Leu Val
              260   265   270

Ala Gln Ala Gly Val Gln Trp His Tyr Leu Asp Ser Leu Gln Pro Leu
            275   280   285

Pro Pro Gly Phe Lys Arg Phe Ser Cys Leu Ser Leu Pro Arg Ser Trp
    290   295   300

Asp Tyr Ile Glu Asp Asp Met Lys Ile Asp Glu Lys Cys Val Glu Ala
305   310   315   320

Asp Glu Glu Thr Phe Glu Ser Asp Lys Glu Glu Phe Val Gly Tyr Gly
                325   330   335

Gln Lys Phe Phe Ile Ala Gly Phe Arg Arg Ser Met Arg Leu Cys Arg
              340   345   350

```
Arg Lys Ser His Leu Ser Pro Leu His Ala Ser Val Cys Cys Thr Gly
        355             360             365
Ser Cys Tyr Ser Ala Val Gly Ala Pro Tyr Glu Glu Val Val Arg Tyr
        370             375             380
Gln Arg Arg Pro Ser Asp Lys Tyr Arg Leu Ile Val Leu Met Gly Pro
385             390             395             400
Ser Gly Val Gly Val Asn Glu Leu Arg Arg Gln Leu Ile Glu Phe Asn
                405             410             415
Pro Ser His Phe Gln Ser Ala Val Pro His Thr Thr Arg Thr Lys Lys
            420             425             430
Ser Tyr Glu Met Asn Gly Arg Glu Tyr His Tyr Val Ser Lys Glu Thr
            435             440             445
Phe Glu Asn Leu Ile Tyr Ser His Arg Met Leu Glu Tyr Gly Glu Tyr
        450             455             460
Lys Gly His Leu Tyr Gly Thr Ser Val Asp Ala Val Gln Thr Val Leu
465             470             475             480
Val Glu Gly Lys Ile Cys Val Met Asp Leu Glu Pro Gln Asp Ile Gln
                485             490             495
Gly Val Arg Thr His Glu Leu Lys Pro Tyr Val Ile Phe Ile Lys Pro
            500             505             510
Ser Asn Met Arg Cys Met Lys Gln Ser Arg Lys Asn Ala Lys Val Ile
            515             520             525
Thr Asp Tyr Tyr Val Asp Met Lys Phe Lys Asp Glu Asp Leu Gln Glu
            530             535             540
Met Glu Asn Leu Ala Gln Arg Met Glu Thr Gln Phe Gly Gln Phe Phe
545             550             555             560
Asp His Val Ile Val Asn Asp Ser Leu His Asp Ala Cys Ala Gln Leu
                565             570             575
Leu Ser Ala Ile Gln Lys Ala Gln Glu Glu Pro Gln Trp Val Pro Ala
            580             585             590
Thr Trp Ile Ser Ser Asp Thr Glu Ser Gln
            595             600
```

<210> 4819

<211> 498

<212> PRT

<213> Homo sapiens

<400> 4819

```
Met Glu Ser Pro Arg Gly Trp Thr Leu Gln Val Ala Pro Glu Glu Gly
 1               5                  10                  15
Gln Val Leu Cys Asn Val Lys Thr Ala Thr Arg Gly Leu Ser Glu Gly
               20                  25                  30
Ala Val Ser Gly Gly Trp Gly Ala Trp Glu Asn Ser Thr Glu Val Pro
               35                  40                  45
Arg Glu Ala Gly Asp Gly Gln Arg Gln Gln Ala Thr Leu Gly Ala Ala
           50                  55                  60
Asp Glu Gln Gly Gly Pro Gly Arg Glu Leu Gly Pro Ala Asp Gly Gly
 65                  70                  75                  80
Arg Asp Gly Ala Gly Pro Arg Ser Glu Pro Ala Asp Arg Ala Leu Arg
                   85                  90                  95
Pro Ser Pro Leu Pro Glu Glu Pro Gly Cys Arg Cys Gly Glu Cys Gly
               100                 105                 110
Lys Ala Phe Ser Gln Gly Ser Tyr Leu Leu Gln His Arg Arg Val His
               115                 120                 125
Thr Gly Glu Lys Pro Tyr Thr Cys Pro Glu Cys Gly Lys Ala Phe Ala
           130                 135                 140
Trp Ser Ser Asn Leu Ser Gln His Gln Arg Ile His Ser Gly Glu Lys
145                 150                 155                 160
Pro Tyr Ala Cys Arg Glu Cys Gly Lys Ala Phe Arg Ala Gln Ser Gln
                   165                 170                 175
Leu Ile His His Gln Glu Thr His Ser Gly Leu Lys Pro Phe Arg Cys
               180                 185                 190
Pro Asp Cys Gly Lys Ser Phe Gly Arg Ser Thr Thr Leu Val Gln His
               195                 200                 205
Arg Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Pro Glu Cys Gly
           210                 215                 220
Lys Ala Phe Ser Trp Asn Ser Asn Phe Leu Glu His Arg Arg Val His
225                 230                 235                 240
Thr Gly Ala Arg Pro His Ala Cys Arg Asp Cys Gly Lys Ala Phe Ser
                   245                 250                 255
```

Gln Ser Ser Asn Leu Ala Glu His Leu Lys Ile His Ala Gly Ala Arg
              260   265   270

Pro His Ala Cys Pro Asp Cys Gly Lys Ala Phe Val Arg Val Ala Gly
          275   280   285

Leu Arg Gln His Arg Arg Thr His Ser Ser Glu Lys Pro Phe Pro Cys
      290   295   300

Ala Glu Cys Gly Lys Ala Phe Arg Glu Ser Ser Gln Leu Leu Gln His
305   310   315   320

Gln Arg Thr His Thr Gly Glu Arg Pro Phe Glu Cys Ala Glu Cys Gly
              325   330   335

Gln Ala Phe Val Met Gly Ser Tyr Leu Ala Glu His Arg Arg Val His
              340   345   350

Thr Gly Glu Lys Pro His Ala Cys Ala Gln Cys Gly Lys Ala Phe Ser
          355   360   365

Gln Arg Ser Asn Leu Leu Ser His Arg Arg Thr His Ser Gly Ala Lys
      370   375   380

Pro Phe Ala Cys Ala Asp Cys Gly Lys Ala Phe Arg Gly Ser Ser Gly
385   390   395   400

Leu Ala His His Arg Leu Ser His Thr Gly Glu Arg Pro Phe Ala Cys
              405   410   415

Ala Glu Cys Gly Lys Ala Phe Arg Gly Ser Ser Glu Leu Arg Gln His
              420   425   430

Gln Arg Leu His Ser Gly Glu Arg Pro Phe Val Cys Ala His Cys Ser
          435   440   445

Lys Ala Phe Val Arg Lys Ser Glu Leu Leu Ser His Arg Arg Thr His
      450   455   460

Thr Gly Glu Arg Pro Tyr Ala Cys Gly Glu Cys Gly Lys Pro Phe Ser
465   470   475   480

His Arg Cys Asn Leu Asn Glu His Gln Lys Arg His Gly Gly Arg Ala
              485   490   495

Ala Pro

<210> 4820
<211> 486

<212> PRT

<213> Homo sapiens

<400> 4820

```
Met Arg Gly Arg Gly Ser Gln Gln Gln Gln Pro Thr Arg Arg Gln Gly
1               5                   10                  15
Gln Lys Leu Pro Ser Pro Ser Pro Ala Gly Lys Tyr Glu Ser Ala Gln
                20                  25                  30
Pro Gly Gly Thr Gln Pro Glu Pro Gly Leu Gly Ala Arg Met Ala Ile
            35                  40                  45
His Lys Ala Leu Val Met Cys Leu Gly Leu Pro Leu Phe Leu Phe Pro
        50                  55                  60
Gly Ala Trp Ala Gln Gly His Val Pro Pro Gly Cys Ser Gln Gly Leu
65                  70                  75                  80
Asn Pro Leu Tyr Tyr Asn Leu Cys Asp Arg Ser Gly Ala Trp Gly Ile
                85                  90                  95
Val Leu Glu Ala Val Ala Gly Ala Gly Ile Val Thr Thr Phe Val Leu
                100                 105                 110
Thr Ile Ile Leu Val Ala Ser Leu Pro Phe Val Gln Asp Thr Lys Lys
            115                 120                 125
Arg Ser Leu Leu Gly Thr Gln Val Phe Phe Leu Leu Gly Thr Leu Gly
        130                 135                 140
Leu Phe Cys Leu Val Phe Ala Cys Val Val Lys Pro Asp Phe Ser Thr
145                 150                 155                 160
Cys Ala Ser Arg Arg Phe Leu Phe Gly Val Leu Phe Ala Ile Cys Phe
                165                 170                 175
Ser Cys Leu Ala Ala His Val Phe Ala Leu Asn Phe Leu Ala Arg Lys
                180                 185                 190
Asn His Gly Pro Arg Gly Trp Val Ile Phe Thr Val Ala Leu Leu Leu
            195                 200                 205
Thr Leu Val Glu Val Ile Ile Asn Thr Glu Trp Leu Ile Ile Thr Leu
        210                 215                 220
Val Arg Gly Ser Gly Glu Gly Gly Pro Gln Gly Asn Ser Ser Ala Gly
225                 230                 235                 240
Trp Ala Val Ala Ser Pro Cys Ala Ile Ala Asn Met Asp Phe Val Met
                245                 250                 255
```

Ala Leu Ile Tyr Val Met Leu Leu Leu Leu Gly Ala Phe Leu Gly Ala
              260   265   270

Trp Pro Ala Leu Cys Gly Arg Tyr Lys Arg Trp Arg Lys His Gly Val
              275   280   285

Phe Val Leu Leu Thr Thr Ala Thr Ser Val Ala Ile Trp Val Val Trp
              290   295   300

Ile Val Met Tyr Thr Tyr Gly Asn Lys Gln His Asn Ser Pro Thr Trp
305   310   315   320

Asp Asp Pro Thr Leu Ala Ile Ala Leu Ala Ala Asn Ala Trp Ala Phe
              325   330   335

Val Leu Phe Tyr Val Ile Pro Glu Val Ser Gln Val Thr Lys Ser Ser
              340   345   350

Pro Glu Gln Ser Tyr Gln Gly Asp Met Tyr Pro Thr Arg Gly Val Gly
              355   360   365

Tyr Glu Thr Ile Leu Lys Glu Gln Lys Gly Gln Ser Met Phe Val Glu
              370   375   380

Asn Lys Ala Phe Ser Met Asp Glu Pro Val Ala Ala Lys Arg Pro Val
385   390   395   400

Ser Pro Tyr Ser Gly Tyr Asn Gly Gln Leu Leu Thr Ser Val Tyr Gln
              405   410   415

Pro Thr Glu Met Ala Leu Met His Lys Val Pro Ser Glu Gly Ala Tyr
              420   425   430

Asp Ile Ile Leu Pro Arg Ala Thr Ala Asn Ser Gln Val Met Gly Ser
              435   440   445

Ala Asn Ser Thr Leu Arg Ala Glu Asp Met Tyr Ser Ala Gln Ser His
              450   455   460

Gln Ala Ala Thr Pro Pro Lys Asp Gly Lys Asn Ser Gln Val Phe Arg
465   470   475   480

Asn Pro Tyr Val Trp Asp
              485

<210> 4821
<211> 301
<212> PRT
<213> Homo sapiens

<400> 4821

```
Met Tyr Thr Arg Arg Tyr Ser Ser Ile Ser Ser Thr Ile Met Asp Val
 1               5                  10                  15

Asp Ser Thr Ile Ser Ser Gly Arg Ser Thr Pro Ala Met Met Asn Gly
                20                  25                  30

Gln Gly Ser Thr Thr Ser Ser Ser Lys Asn Ile Ala Tyr Asn Cys Cys
            35                  40                  45

Trp Asp Gln Cys Gln Ala Cys Phe Asn Ser Ser Pro Asp Leu Ala Asp
        50                  55                  60

His Ile Arg Ser Ile His Val Asp Gly Gln Arg Gly Gly Val Phe Val
65                  70                  75                  80

Cys Leu Trp Lys Gly Cys Lys Val Tyr Asn Thr Pro Ser Thr Ser Gln
                    85                  90                  95

Ser Trp Leu Gln Arg His Met Leu Thr His Ser Gly Asp Lys Pro Phe
                100                 105                 110

Lys Cys Val Val Gly Gly Cys Asn Ala Ser Phe Ala Ser Gln Gly Gly
            115                 120                 125

Leu Ala Arg His Val Pro Thr His Phe Ser Gln Gln Asn Ser Ser Lys
        130                 135                 140

Val Ser Ser Gln Pro Lys Ala Lys Glu Glu Ser Pro Ser Lys Ala Gly
145                 150                 155                 160

Met Asn Lys Arg Arg Lys Leu Lys Asn Lys Arg Arg Arg Ser Leu Pro
                165                 170                 175

Arg Pro His Asp Phe Phe Asp Ala Gln Thr Leu Asp Ala Ile Arg His
                180                 185                 190

Arg Ala Ile Cys Phe Asn Leu Ser Ala His Ile Glu Ser Leu Gly Lys
            195                 200                 205

Gly His Ser Val Val Phe His Ser Thr Val Ile Ala Lys Arg Lys Glu
        210                 215                 220

Asp Ser Gly Lys Ile Lys Leu Leu Leu His Trp Met Pro Glu Asp Ile
225                 230                 235                 240

Leu Pro Asp Val Trp Val Asn Glu Ser Glu Arg His Gln Leu Lys Thr
                245                 250                 255

Lys Val Val His Leu Ser Lys Leu Pro Lys Asp Thr Ala Leu Leu Leu
```

```
                260                    265                    270
Asp Pro Asn Ile Tyr Arg Thr Met Pro Gln Lys Arg Leu Lys Arg Thr
            275                    280                    285
Leu Ile Arg Lys Val Phe Asn Leu Tyr Leu Ser Lys Gln
        290                    295                    300
```

<210> 4822

<211> 626

<212> PRT

<213> Homo sapiens

<400> 4822

```
Met Ala Val Ser Gly Phe Thr Leu Gly Thr Cys Ile Leu Leu Leu His
1               5                   10                  15
Ile Ser Tyr Val Ala Asn Tyr Pro Asn Gly Lys Val Thr Gln Ser Cys
                20                  25                  30
His Gly Met Ile Pro Glu His Gly His Ser Pro Gln Ser Val Pro Val
            35                  40                  45
His Asp Ile Tyr Val Ser Gln Met Thr Phe Arg Pro Gly Asp Gln Ile
        50                  55                  60
Glu Val Thr Leu Ser Gly His Pro Phe Lys Gly Phe Leu Leu Glu Ala
65                  70                  75                  80
Arg Asn Ala Glu Asp Leu Asn Gly Pro Pro Ile Gly Ser Phe Thr Leu
                85                  90                  95
Ile Asp Ser Glu Val Ser Gln Leu Leu Thr Cys Glu Asp Ile Gln Gly
                100                 105                 110
Ser Ala Val Ser His Arg Ser Ala Ser Lys Lys Thr Glu Ile Lys Val
            115                 120                 125
Tyr Trp Asn Ala Pro Ser Ser Ala Pro Asn His Thr Gln Phe Leu Val
        130                 135                 140
Thr Val Val Glu Lys Tyr Lys Ile Tyr Trp Val Lys Ile Pro Gly Pro
145                 150                 155                 160
Ile Ile Ser Gln Pro Asn Ala Phe Pro Phe Thr Thr Pro Lys Ala Thr
                165                 170                 175
Val Val Leu Leu Pro Thr Leu Pro Pro Val Ser His Leu Thr Lys Pro
```

```
                180                  185                  190
Phe Ser Ala Ser Asp Cys Gly Asn Lys Lys Phe Cys Ile Arg Ser Pro
        195                  200                  205
Leu Asn Cys Asp Pro Glu Lys Glu Ala Ser Cys Val Phe Leu Ser Phe
        210                  215                  220
Thr Arg Asp Asp Gln Ser Val Met Val Glu Met Ser Gly Pro Ser Lys
225                  230                  235                  240
Gly Tyr Leu Ser Phe Ala Leu Ser His Asp Gln Trp Met Gly Asp Asp
                245                  250                  255
Asp Ala Tyr Leu Cys Ile His Glu Asp Gln Thr Val Tyr Ile Gln Pro
                260                  265                  270
Ser His Leu Thr Gly Arg Ser His Pro Val Met Asp Ser Arg Asp Thr
        275                  280                  285
Leu Glu Asp Met Ala Trp Arg Leu Ala Asp Gly Val Met Gln Cys Ser
        290                  295                  300
Phe Arg Arg Asn Ile Thr Leu Pro Gly Val Lys Asn Arg Phe Asp Leu
305                  310                  315                  320
Asn Thr Ser Tyr Tyr Ile Phe Leu Ala Asp Gly Ala Ala Asn Asp Gly
                325                  330                  335
Arg Ile Tyr Lys His Ser Gln Gln Pro Leu Ile Thr Tyr Glu Lys Tyr
                340                  345                  350
Asp Val Thr Asp Ser Pro Lys Asn Ile Gly Gly Ser His Ser Val Leu
        355                  360                  365
Leu Leu Lys Val His Gly Ala Leu Met Phe Val Ala Trp Met Thr Thr
        370                  375                  380
Val Ser Ile Gly Val Leu Val Ala Arg Phe Phe Lys Pro Val Trp Ser
385                  390                  395                  400
Lys Ala Phe Leu Leu Gly Glu Ala Ala Trp Phe Gln Val His Arg Met
                405                  410                  415
Leu Met Phe Thr Thr Thr Val Leu Thr Cys Ile Ala Phe Val Met Pro
                420                  425                  430
Phe Ile Tyr Arg Gly Gly Trp Ser Arg His Ala Gly Tyr His Pro Tyr
                435                  440                  445
Leu Gly Cys Ile Val Met Thr Leu Ala Val Leu Gln Pro Leu Leu Ala
        450                  455                  460
Val Phe Arg Pro Pro Leu His Asp Pro Arg Arg Gln Met Phe Asn Trp
```

```
465                     470                     475                     480
Thr His Trp Ser Met Gly Thr Ala Ala Arg Ile Ile Ala Val Ala Ala
                    485                     490                     495
Met Phe Leu Gly Met Asp Leu Pro Gly Leu Asn Leu Pro Asp Ser Trp
                500                     505                     510
Lys Thr Tyr Ala Met Thr Gly Phe Val Ala Trp His Val Gly Thr Glu
                515                     520                     525
Val Val Leu Glu Leu Lys Tyr Trp Met Met Thr Glu Phe Arg Ser Phe
    530                     535                     540
Ser His Leu Leu Gln Trp Lys Gln Arg Val Met Leu Leu Lys Arg Gln
545                     550                     555                     560
Cys Trp Gln Phe Met Ser Val Gly Met Leu Leu Phe Ser Ser Tyr Phe
                565                     570                     575
Tyr Leu Gln Ser Thr Ile Tyr Glu Gln Ala Lys Thr Leu Ala Phe Ala
                580                     585                     590
Gly Gln Val Ile Ile Ile Ile Lys Pro Lys Lys Leu Glu Ala Cys Pro
                595                     600                     605
Asp Cys Leu Glu His Ile Cys Glu Phe Ser Leu Gly Arg Leu Gly Ser
                610                     615                     620
Cys Leu
625
```

<210> 4823

<211> 827

<212> PRT

<213> Homo sapiens

<400> 4823

```
Met Ile Arg Arg Leu Lys Thr Glu Val Leu Thr Gln Leu Pro Pro Lys
1                   5                       10                      15
Val Arg Gln Arg Ile Pro Phe Asp Leu Pro Ser Ala Ala Ala Lys Glu
                20                      25                      30
Leu Asn Thr Ser Phe Glu Glu Trp Glu Lys Ile Met Arg Thr Pro Asn
            35                      40                      45
Ser Gly Ala Met Glu Thr Val Met Gly Leu Ile Thr Arg Met Phe Lys
```

```
            50                    55                    60
Gln Thr Ala Ile Ala Lys Ala Gly Ala Val Lys Asp Tyr Ile Lys Met
 65                    70                    75                    80
Met Leu Gln Asn Asp Ser Leu Lys Phe Leu Val Phe Ala His His Leu
                    85                    90                    95
Ser Met Leu Gln Ala Cys Thr Glu Ala Val Ile Glu Asn Lys Thr Arg
                   100                   105                   110
Tyr Ile Arg Ile Asp Gly Ser Val Ser Ser Ser Glu Arg Ile His Leu
                   115                   120                   125
Val Asn Gln Phe Gln Lys Asp Pro Asp Thr Arg Val Ala Ile Leu Ser
                   130                   135                   140
Ile Gln Ala Ala Gly Gln Gly Leu Thr Phe Thr Ala Ala Ser His Val
145                   150                   155                   160
Val Phe Ala Glu Leu Tyr Trp Asp Pro Gly His Ile Lys Gln Ala Glu
                   165                   170                   175
Asp Arg Ala His Arg Ile Gly Gln Cys Ser Ser Val Asn Ile His Tyr
                   180                   185                   190
Leu Ile Ala Asn Gly Thr Leu Asp Thr Leu Met Trp Gly Met Leu Asn
                   195                   200                   205
Arg Lys Ala Gln Val Thr Gly Ser Thr Leu Asn Gly Arg Lys Glu Lys
                   210                   215                   220
Ile Gln Ala Glu Glu Gly Asp Lys Glu Lys Trp Asp Phe Leu Gln Phe
225                   230                   235                   240
Ala Glu Ala Trp Thr Pro Asn Asp Ser Ser Glu Glu Leu Arg Lys Glu
                   245                   250                   255
Ala Leu Phe Thr His Phe Glu Lys Glu Lys Gln His Asp Ile Arg Ser
                   260                   265                   270
Phe Phe Val Pro Gln Pro Lys Lys Arg Gln Leu Met Thr Ser Cys Asp
                   275                   280                   285
Glu Ser Lys Arg Phe Arg Glu Glu Asn Thr Val Val Ser Ser Asp Pro
                   290                   295                   300
Thr Lys Thr Ala Ala Arg Asp Ile Ile Asp Tyr Glu Ser Asp Val Glu
305                   310                   315                   320
Pro Glu Thr Lys Arg Leu Lys Leu Ala Ala Ser Glu Asp His Cys Ser
                   325                   330                   335
Pro Ser Glu Glu Thr Pro Ser Gln Ser Lys Gln Ile Arg Thr Pro Leu
```

```
              340                    345                    350
Val Glu Ser Val Gln Glu Ala Lys Ala Gln Leu Thr Thr Pro Ala Phe
              355                    360                    365
Pro Val Glu Gly Trp Gln Cys Ser Leu Cys Thr Tyr Ile Asn Asn Ser
         370                    375                    380
Glu Leu Pro Tyr Cys Glu Met Cys Glu Thr Pro Gln Gly Ser Ala Val
385                    390                    395                    400
Met Gln Ile Asp Ser Leu Asn His Ile Gln Asp Lys Asn Glu Lys Asp
                   405                    410                    415
Asp Ser Gln Lys Asp Thr Ser Lys Lys Val Gln Thr Ile Ser Asp Cys
              420                    425                    430
Glu Lys Gln Ala Leu Ala Gln Ser Glu Pro Gly Gln Leu Ala Asp Ser
              435                    440                    445
Lys Glu Glu Thr Pro Lys Ile Glu Lys Glu Asp Gly Leu Thr Ser Gln
         450                    455                    460
Pro Gly Asn Glu Gln Trp Lys Ser Ser Asp Thr Leu Pro Val Tyr Asp
465                    470                    475                    480
Thr Leu Met Phe Cys Ala Ser Arg Asn Thr Asp Arg Ile His Ile Tyr
                   485                    490                    495
Thr Lys Asp Gly Lys Gln Met Ser Cys Asn Phe Ile Pro Leu Asp Ile
              500                    505                    510
Lys Leu Asp Leu Trp Glu Asp Leu Pro Ala Ser Phe Gln Leu Lys Gln
              515                    520                    525
Tyr Arg Ser Leu Ile Leu Arg Phe Val Arg Glu Trp Ser Ser Leu Thr
              530                    535                    540
Ala Met Lys Gln Arg Ile Ile Arg Lys Ser Gly Gln Leu Phe Cys Ser
545                    550                    555                    560
Pro Ile Leu Ala Leu Glu Glu Ile Thr Lys Gln Gln Thr Lys Gln Asn
              565                    570                    575
Cys Thr Lys Arg Tyr Ile Thr Lys Glu Asp Val Ala Val Ala Ser Met
              580                    585                    590
Asp Lys Ala Lys Asn Val Gly Gly His Val Arg Leu Ile Thr Lys Glu
              595                    600                    605
Ser Arg Pro Arg Asp Pro Phe Thr Lys Lys Leu Leu Glu Asp Gly Ala
         610                    615                    620
Cys Val Pro Phe Leu Asn Pro Tyr Thr Val Gln Ala Asp Leu Thr Val
```

```
      625                     630                     635                     640
Lys Pro Ser Thr Ser Lys Gly Tyr Leu Gln Ala Val Asp Asn Glu Gly
                    645                 650                 655
Asn Pro Leu Cys Leu Arg Cys Gln Gln Pro Thr Cys Gln Thr Lys Gln
                660                 665                 670
Ala Cys Lys Ala Asn Ser Trp Asp Ser Arg Phe Cys Ser Leu Lys Cys
            675                 680                 685
Gln Glu Glu Phe Trp Ile Arg Ser Asn Asn Ser Tyr Leu Arg Ala Lys
        690                 695                 700
Val Phe Glu Thr Glu His Gly Val Cys Gln Leu Cys Asn Val Asn Ala
705                 710                 715                 720
Gln Glu Leu Phe Leu Arg Leu Arg Asp Ala Pro Lys Ser Gln Arg Lys
                725                 730                 735
Asn Leu Leu Tyr Ala Thr Trp Thr Ser Lys Leu Pro Leu Glu Gln Leu
                740                 745                 750
Asn Glu Met Ile Arg Asn Pro Gly Glu Gly His Phe Trp Gln Val Asp
            755                 760                 765
His Ile Lys Pro Val Tyr Gly Gly Gly Gly Gln Cys Ser Leu Asp Asn
        770                 775                 780
Leu Gln Thr Leu Cys Thr Val Cys His Lys Glu Arg Thr Ala Arg Gln
785                 790                 795                 800
Ala Lys Glu Arg Ser Gln Val Arg Arg Gln Ser Leu Ala Ser Lys His
                805                 810                 815
Gly Ser Asp Ile Thr Arg Phe Leu Val Lys Lys
                820                 825
```

<210> 4824

<211> 994

<212> PRT

<213> Homo sapiens

<400> 4824

```
Met Ser Gln Trp Thr Pro Glu Tyr Lys Glu Leu Tyr Thr Leu Lys Val
  1               5                   10                  15
Asp Met Lys Ser Glu Ile Pro Ser Asp Ala Pro Lys Thr Gln Glu Ser
```

```
                  20                      25                      30
Leu Lys Gly Ile Leu Leu His Pro Glu Pro Ile Gly Ala Ala Lys Ser

                  35                      40                      45
Phe Pro Ala Gly Val Glu Met Ile Asn Ser Lys Val Gly Asn Glu Phe
         50                      55                      60
Ser His Leu Cys Asp Asp Ser Gln Lys Gln Glu Lys Glu Met Asn Gly
65                      70                      75                      80
Asn Gln Gln Glu Gln Glu Lys Ser Leu Val Val Arg Lys Lys Arg Lys
                        85                      90                      95
Ser Gln Gln Ala Gly Pro Ser Tyr Val Gln Asn Cys Val Lys Glu Asn
                 100                     105                     110
Gln Gly Ile Leu Gly Leu Arg Gln His Leu Gly Thr Pro Ser Asp Glu
         115                     120                     125
Asp Asn Asp Ser Ser Phe Ser Asp Cys Leu Ser Ser Pro Ser Ser Ser
         130                     135                     140
Leu His Phe Gly Asp Ser Asp Thr Val Thr Ser Asp Glu Asp Lys Glu
145                     150                     155                     160
Val Ser Val Arg His Ser Gln Thr Ile Leu Asn Ala Lys Ser Arg Ser
                 165                     170                     175
His Ser Ala Arg Ser His Lys Trp Pro Arg Thr Glu Thr Glu Ser Val
                 180                     185                     190
Ser Gly Leu Leu Met Lys Arg Pro Cys Leu His Gly Ser Ser Leu Arg
         195                     200                     205
Arg Leu Pro Cys Arg Lys Arg Phe Val Lys Asn Asn Ser Ser Gln Arg
         210                     215                     220
Thr Gln Lys Gln Lys Glu Arg Ile Leu Met Gln Arg Lys Lys Arg Glu
225                     230                     235                     240
Val Leu Ala Arg Arg Lys Tyr Ala Leu Leu Pro Ser Ser Ser Ser Ser
                 245                     250                     255
Ser Glu Asn Asp Leu Ser Ser Glu Ser Ser Ser Ser Ser Ser Thr Glu
                 260                     265                     270
Gly Glu Glu Asp Leu Phe Val Ser Ala Ser Glu Asn His Gln Asn Asn
         275                     280                     285
Pro Ala Val Pro Ser Gly Ser Ile Asp Glu Asp Val Val Val Ile Glu
         290                     295                     300
```

Ala Ser Ser Thr Pro Gln Val Thr Ala Asn Glu Glu Ile Asn Val Thr
305   310   315   320

Ser Thr Asp Ser Glu Val Glu Ile Val Thr Val Gly Glu Ser Tyr Arg
                325   330   335

Ser Arg Ser Thr Leu Gly His Ser Arg Ser His Trp Ser Gln Gly Ser
                340   345   350

Ser Ser His Ala Ser Arg Pro Gln Glu Pro Arg Asn Arg Ser Arg Ile
                355   360   365

Ser Thr Val Ile Gln Pro Leu Arg Gln Asn Ala Ala Glu Val Val Asp
        370   375   380

Leu Thr Val Asp Glu Asp Glu Pro Thr Val Val Pro Thr Thr Ser Ala
385   390   395   400

Arg Met Glu Ser Gln Ala Thr Ser Ala Ser Ile Asn Asn Ser Asn Pro
                405   410   415

Ser Thr Ser Glu Gln Ala Ser Asp Thr Ala Ser Ala Val Thr Ser Ser
                420   425   430

Gln Pro Ser Thr Val Ser Glu Thr Ser Ala Thr Leu Thr Ser Asn Ser
                435   440   445

Thr Thr Gly Thr Ser Ile Gly Asp Asp Ser Arg Arg Thr Thr Ser Ser
        450   455   460

Ala Val Thr Glu Thr Gly Pro Pro Ala Met Pro Arg Leu Pro Ser Cys
465   470   475   480

Cys Pro Gln His Ser Pro Cys Gly Gly Ser Ser Gln Asn His His Ala
                485   490   495

Leu Gly His Pro His Thr Ser Cys Phe Gln Gln His Gly His His Phe
                500   505   510

Gln His His His His His His His Thr Pro His Pro Ala Val Pro Val
                515   520   525

Ser Pro Ser Phe Ser Asp Pro Ala Cys Pro Val Glu Arg Pro Pro Gln
                530   535   540

Val Gln Ala Pro Cys Gly Ala Asn Ser Ser Ser Gly Thr Ser Tyr His
545   550   555   560

Glu Gln Gln Ala Leu Pro Val Asp Leu Ser Asn Ser Gly Ile Arg Ser
                565   570   575

His Gly Ser Gly Ser Phe His Gly Ala Ser Ala Phe Asp Pro Cys Cys
                580   585   590

Pro Val Ser Ser Ser Arg Ala Ala Ile Phe Gly His Gln Ala Ala Ala
        595   600   605

Ala Ala Pro Ser Gln Pro Leu Ser Ser Ile Asp Gly Tyr Gly Ser Ser
        610   615   620

Met Val Ala Gln Pro Gln Pro Gln Pro Pro Gln Pro Ser Leu Ser
625   630   635   640

Ser Cys Arg His Tyr Met Pro Pro Pro Tyr Ala Ser Leu Thr Arg Pro
                645   650   655

Leu His His Gln Ala Ser Ala Cys Pro His Ser His Gly Asn Pro Pro
                660   665   670

Pro Gln Thr Gln Pro Pro Pro Gln Val Asp Tyr Val Ile Pro His Pro
        675   680   685

Val His Ala Phe His Ser Gln Ile Ser Ser His Ala Thr Ser His Pro
        690   695   700

Val Ala Pro Pro Pro Pro Thr His Leu Ala Ser Thr Ala Ala Pro Ile
705   710   715   720

Pro Gln His Leu Pro Pro Thr His Gln Pro Ile Ser His His Ile Pro
                725   730   735

Ala Thr Ala Pro Pro Ala Gln Arg Leu His Pro His Glu Val Met Gln
                740   745   750

Arg Met Glu Val Gln Arg Arg Arg Met Met Gln His Pro Thr Arg Ala
        755   760   765

His Glu Arg Pro Pro Pro His Pro His Arg Met His Pro Asn Tyr Gly
        770   775   780

His Gly His His Ile His Val Pro Gln Thr Met Ser Ser His Pro Arg
785   790   795   800

Gln Ala Pro Glu Arg Ser Ala Trp Glu Leu Gly Ile Glu Ala Gly Val
                805   810   815

Thr Ala Ala Thr Tyr Thr Pro Gly Ala Leu His Pro His Leu Ala His
                820   825   830

Tyr His Ala Pro Pro Arg Leu His His Leu Gln Leu Gly Ala Leu Pro
        835   840   845

Leu Met Val Pro Asp Met Ala Gly Tyr Pro His Ile Arg Tyr Ile Ser
        850   855   860

Ser Gly Leu Asp Gly Thr Ser Phe Arg Gly Pro Phe Arg Gly Asn Phe
865   870   875   880

Glu Glu Leu Ile His Leu Glu Glu Arg Leu Gly Asn Val Asn Arg Gly
                885   890   895
Ala Ser Gln Gly Thr Ile Glu Arg Cys Thr Tyr Pro His Lys Tyr Lys
                900   905   910
Lys Val Thr Thr Asp Trp Phe Ser Gln Arg Lys Leu His Cys Lys Gln
            915   920   925
Asp Gly Glu Glu Gly Thr Glu Glu Asp Thr Glu Glu Lys Cys Thr Ile
        930   935   940
Cys Leu Ser Ile Leu Glu Glu Gly Glu Asp Val Arg Arg Leu Pro Cys
945   950   955   960
Met His Leu Phe His Gln Val Cys Val Asp Gln Trp Leu Val Thr Asn
                965   970   975
Lys Lys Cys Pro Ile Cys Arg Val Asp Ile Glu Ala Gln Leu Pro Ser
            980   985   990
Glu Ser

<210> 4825
<211> 105
<212> PRT
<213> Homo sapiens

<400> 4825
Met Glu Gln Ser Trp Thr Glu Asn Asp Phe Asp Glu Leu Arg Glu Glu
  1   5   10   15
Gly Phe Arg Arg Ser Asn Tyr Glu Leu Gln Glu Glu Ile Gln Ile Lys
                20   25   30
Gly Lys Glu Val Lys Asn Phe Glu Lys Asn Leu Asp Glu Cys Ile Thr
            35   40   45
Arg Ile Thr Asn Thr Glu Lys Cys Leu Glu Asp Leu Met Glu Leu Lys
        50   55   60
Ala Lys Ala Arg Glu Leu Cys Glu Glu Cys Arg Ser Leu Arg Ser Arg
65   70   75   80
Cys Asp Gln Leu Glu Glu Arg Val Ser Val Met Glu Asp Glu Met Asn
                85   90   95

Glu Met Lys Gln Glu Gly Lys Phe Arg
              100   105

<210> 4826
<211> 136
<212> PRT
<213> Homo sapiens

<400> 4826
Met Trp Leu Glu Val Arg Ala Leu Leu Leu Ser Cys Val Arg Val Phe
  1   5   10   15
Gln His Gly Thr Asp Gly Ser Ser Gly His Ser Leu Ser Gln Gly Leu
                 20   25   30
Ala Arg Leu Arg His Asp Gly Pro Ser Pro Ala Leu Thr Thr Thr Lys
               35   40   45
Ser Gly Arg Val Glu Phe Ala Val Asn Ser Ala Val Pro Met Glu Thr
             50   55   60
Cys Val Val Ser Glu Gln Gln Tyr Leu Leu Glu Leu Val Gln Thr Pro
 65   70   75   80
Arg Leu Pro Ser Gly Thr Thr Trp Ser Thr Ser Pro Arg Glu Ala Ala
                 85   90   95
Ala Leu Arg Gly Cys Pro Ala Gln Trp Pro Leu Ser Arg Val Ser Leu
               100   105   110
Gln Glu Ala Ser Glu Gln Ser Leu Lys Pro Gly Met Ala Pro Ser Pro
             115   120   125
Cys Cys His His Cys Val Leu Thr
           130   135

<210> 4827
<211> 250
<212> PRT
<213> Homo sapiens

<400> 4827

```
Met Ala Glu Gly Gly Ala Ser Lys Gly Gly Gly Glu Glu Pro Gly Lys
 1               5                    10                   15
Leu Pro Glu Pro Ala Glu Glu Glu Ser Gln Val Leu Arg Gly Thr Gly
            20                  25                   30
His Cys Lys Trp Phe Asn Val Arg Met Gly Phe Gly Phe Ile Ser Met
            35                  40                   45
Ile Asn Arg Glu Gly Ser Pro Leu Asp Ile Pro Val Asp Val Phe Val
        50                  55                  60
His Gln Ser Lys Leu Phe Met Glu Gly Phe Arg Ser Leu Lys Glu Gly
65                  70                   75                   80
Glu Pro Val Glu Phe Thr Phe Lys Lys Ser Ser Lys Gly Leu Glu Ser
                85                  90                   95
Ile Arg Val Thr Gly Pro Gly Gly Ser Pro Cys Leu Gly Ser Glu Arg
                100                 105                  110
Arg Pro Lys Gly Lys Thr Leu Gln Lys Arg Lys Pro Lys Gly Asp Arg
            115                 120                 125
Cys Tyr Asn Cys Gly Gly Leu Asp His His Ala Lys Glu Cys Ser Leu
        130                 135                 140
Pro Pro Gln Pro Lys Lys Cys His Tyr Cys Gln Ser Ile Met His Met
145                 150                 155                 160
Val Ala Asn Cys Pro His Lys Asn Val Ala Gln Pro Pro Ala Ser Ser
                165                 170                 175
Gln Gly Arg Gln Glu Ala Glu Ser Gln Pro Cys Thr Ser Thr Leu Pro
                180                 185                 190
Arg Glu Val Gly Gly Gly His Gly Cys Thr Ser Pro Pro Phe Pro Gln
            195                 200                 205
Glu Ala Arg Ala Glu Ile Ser Glu Arg Ser Gly Arg Ser Pro Gln Glu
    210                 215                 220
Ala Ser Ser Thr Lys Ser Ser Ile Ala Pro Glu Glu Gln Ser Lys Lys
225                 230                 235                 240
Gly Pro Ser Val Gln Lys Arg Lys Lys Thr
                245                 250
```

<210> 4828
<211> 748

<212> PRT
<213> Homo sapiens

<400> 4828

```
Met Lys Gln Met His Glu Trp Asn Phe Thr Ala Ser Ser Ile Lys Gly
1               5                   10                  15

Ile Ser Leu Ser Lys Phe Asp Glu Arg Cys Cys Phe Leu Tyr Val His
                20                  25                  30

Asp Asn Ser Asp Asp Phe Gln Ile Tyr Phe Ser Thr Glu Glu Gln Cys
            35                  40                  45

Ser Arg Phe Phe Ser Leu Val Lys Glu Met Ile Thr Asn Thr Ala Gly
        50                  55                  60

Ser Thr Val Glu Leu Glu Gly Glu Thr Asp Gly Asp Thr Leu Glu Tyr
65                  70                  75                  80

Glu Tyr Asp His Asp Ala Asn Gly Glu Arg Val Val Leu Gly Lys Gly
                85                  90                  95

Thr Tyr Gly Ile Val Tyr Ala Gly Arg Asp Leu Ser Asn Gln Val Arg
                100                 105                 110

Ile Ala Ile Lys Glu Ile Pro Glu Arg Asp Ser Arg Tyr Ser Gln Pro
            115                 120                 125

Leu His Glu Glu Ile Ala Leu His Lys Tyr Leu Lys His Arg Asn Ile
        130                 135                 140

Val Gln Tyr Leu Gly Ser Val Ser Glu Asn Gly Tyr Ile Lys Ile Phe
145                 150                 155                 160

Met Glu Gln Val Pro Gly Gly Ser Leu Ser Ala Leu Leu Arg Ser Lys
                165                 170                 175

Trp Gly Pro Met Lys Glu Pro Thr Ile Lys Phe Tyr Thr Lys Gln Ile
                180                 185                 190

Leu Glu Gly Leu Lys Tyr Leu His Glu Asn Gln Ile Val His Arg Asp
            195                 200                 205

Ile Lys Gly Asp Asn Val Leu Val Asn Thr Tyr Ser Gly Val Val Lys
        210                 215                 220

Ile Ser Asp Phe Gly Thr Ser Lys Arg Leu Ala Gly Val Asn Pro Cys
225                 230                 235                 240

Thr Glu Thr Phe Thr Gly Thr Leu Gln Tyr Met Ala Pro Glu Ile Ile
                245                 250                 255
```

```
Asp Gln Gly Pro Arg Gly Tyr Gly Ala Pro Ala Asp Ile Trp Ser Leu
            260             265             270

Gly Cys Thr Ile Ile Glu Met Ala Thr Ser Lys Pro Pro Phe His Glu
        275             280             285

Leu Gly Glu Pro Gln Ala Ala Met Phe Lys Val Gly Met Phe Lys Ile
        290             295             300

His Pro Glu Ile Pro Glu Ala Leu Ser Ala Glu Ala Arg Ala Phe Ile
305             310             315             320

Leu Ser Cys Phe Glu Pro Asp Pro His Lys Arg Ala Thr Thr Ala Glu
            325             330             335

Leu Leu Arg Glu Gly Phe Leu Arg Gln Val Asn Lys Gly Lys Lys Asn
            340             345             350

Arg Ile Ala Phe Lys Pro Ser Glu Gly Pro Arg Gly Val Val Leu Ala
            355             360             365

Leu Pro Thr Gln Gly Glu Pro Met Ala Thr Ser Ser Ser Glu His Gly
        370             375             380

Ser Val Ser Pro Asp Ser Asp Ala Gln Pro Asp Ala Leu Phe Glu Arg
385             390             395             400

Thr Arg Ala Pro Arg His His Leu Gly His Leu Leu Ser Val Pro Asp
            405             410             415

Glu Ser Ser Ala Leu Glu Asp Arg Gly Leu Ala Ser Ser Pro Glu Asp
            420             425             430

Arg Asp Gln Gly Leu Phe Leu Leu Arg Lys Asp Ser Glu Arg Arg Ala
            435             440             445

Ile Leu Tyr Lys Ile Leu Trp Glu Glu Gln Asn Gln Val Ala Ser Asn
        450             455             460

Leu Gln Glu Cys Val Ala Gln Ser Ser Glu Glu Leu His Leu Ser Val
465             470             475             480

Gly His Ile Lys Gln Ile Ile Gly Ile Leu Arg Asp Phe Ile Arg Ser
            485             490             495

Pro Glu His Arg Val Met Ala Thr Thr Ile Ser Lys Leu Lys Val Asp

            500             505             510

Leu Asp Phe Asp Ser Ser Ser Ile Ser Gln Ile His Leu Val Leu Phe
        515             520             525

Gly Phe Gln Asp Ala Val Asn Lys Ile Leu Arg Asn His Leu Ile Arg
```

```
          530                    535                    540
Pro His Trp Met Phe Ala Met Asp Asn Ile Ile Arg Arg Ala Val Gln
545                    550                    555                    560
Ala Ala Val Thr Ile Leu Ile Pro Glu Leu Arg Ala His Phe Glu Pro
                    565                    570                    575
Thr Cys Glu Thr Glu Gly Val Asp Lys Asp Met Asp Glu Ala Glu Glu
                    580                    585                    590
Gly Tyr Pro Pro Ala Thr Gly Pro Gly Gln Glu Ala Gln Pro His Gln
                    595                    600                    605
Gln His Leu Ser Leu Gln Leu Gly Glu Leu Arg Gln Glu Thr Asn Arg
                    610                    615                    620
Leu Leu Glu His Leu Val Glu Lys Glu Arg Glu Tyr Gln Asn Leu Leu
625                    630                    635                    640
Arg Gln Thr Leu Glu Gln Lys Thr Gln Glu Leu Tyr His Leu Gln Leu
                    645 ·                  650                    655
Lys Leu Lys Ser Asn Cys Ile Thr Glu Asn Pro Ala Gly Pro Tyr Gly
                    660                    665                    670
Gln Arg Thr Asp Lys Glu Leu Ile Asp Trp Leu Arg Leu Gln Gly Ala
                    675                    680                    685
Asp Ala Lys Thr Ile Glu Lys Ile Val Glu Glu Gly Tyr Thr Leu Ser
                    690                    695                    700
Asp Ile Leu Asn Glu Ile Thr Lys Glu Asp Leu Arg Tyr Leu Arg Leu
705                    710                    715                    720
Arg Gly Gly Leu Leu Cys Arg Leu Trp Ser Ala Val Ser Gln Tyr Arg
                    725                    730                    735
Arg Ala Gln Glu Ala Ser Glu Thr Lys Asp Lys Ala
                    740                    745
```

<210> 4829

<211> 572

<212> PRT

<213> Homo sapiens

<400> 4829

Met Cys His Phe Lys Leu Val Ala Ile Val Gly Tyr Leu Ile Arg Leu

```
    1                   5                    10                   15
  Ser Ile Lys Ser Ile Gln Ile Glu Ala Asp Asn Cys Val Thr Asp Ser
                  20                   25                   30
  Leu Thr Ile Tyr Asp Ser Leu Leu Pro Ile Arg Ser Ser Ile Leu Tyr
                  35                   40                   45
  Arg Ile Cys Glu Pro Thr Arg Thr Leu Met Ser Phe Val Ser Thr Asn
            50                   55                   60
  Asn Leu Met Leu Val Thr Phe Lys Ser Pro His Ile Arg Arg Leu Ser
  65                   70                   75                   80
  Gly Ile Arg Ala Tyr Phe Glu Val Ile Pro Glu Gln Lys Cys Glu Asn
                  85                   90                   95
  Thr Val Leu Val Lys Asp Ile Thr Gly Phe Glu Gly Lys Ile Ser Ser
                  100                  105                  110
  Pro Tyr Tyr Pro Ser Tyr Tyr Pro Pro Lys Cys Lys Cys Thr Trp Lys
                  115                  120                  125
  Phe Gln Thr Ser Leu Ser Thr Leu Gly Ile Ala Leu Lys Phe Tyr Asn
            130                  135                  140
  Tyr Ser Ile Thr Lys Lys Ser Met Lys Gly Cys Glu His Gly Trp Trp
  145                  150                  155                  160
  Glu Ile Asn Glu His Met Tyr Cys Gly Ser Tyr Met Asp His Gln Thr
                  165                  170                  175
  Ile Phe Arg Val Pro Ser Pro Leu Val His Ile Gln Leu Gln Cys Ser
                  180                  185                  190
  Ser Arg Leu Ser Asp Lys Pro Leu Leu Ala Glu Tyr Gly Ser Tyr Asn
            195                  200                  205
  Ile Ser Gln Pro Cys Pro Val Gly Ser Phe Arg Cys Ser Ser Gly Leu
            210                  215                  220
  Cys Val Pro Gln Ala Gln Arg Cys Asp Gly Val Asn Asp Cys Phe Asp
  225                  230                  235                  240
  Glu Ser Asp Glu Leu Phe Cys Val Ser Pro Gln Pro Ala Cys Asn Thr
                  245                  250                  255
  Ser Ser Phe Arg Gln His Gly Pro Leu Ile Cys Asp Gly Phe Arg Asp
            260                  265                  270
  Cys Glu Asn Gly Arg Asp Glu Gln Asn Cys Thr Gln Ser Ile Pro Cys
            275                  280                  285
  Asn Asn Arg Thr Phe Lys Cys Gly Asn Asp Ile Cys Phe Arg Lys Gln
```

```
            290                    295                    300
Asn Ala Lys Cys Asp Gly Thr Val Asp Cys Pro Asp Gly Ser Asp Glu
305                    310                    315                    320
Glu Gly Cys Thr Cys Ser Arg Ser Ser Ser Ala Leu His Arg Ile Ile
                    325                    330                    335
Gly Gly Thr Asp Thr Leu Glu Gly Gly Trp Pro Trp Gln Val Ser Leu
                340                    345                    350
His Phe Val Gly Ser Ala Tyr Cys Gly Ala Ser Val Ile Ser Arg Glu
                355                    360                    365
Trp Leu Leu Ser Ala Ala His Cys Phe His Gly Asn Arg Leu Ser Asp
            370                    375                    380
Pro Thr Pro Trp Thr Ala His Leu Gly Met Tyr Val Gln Gly Asn Ala
385                    390                    395                    400
Lys Phe Val Ser Pro Val Arg Arg Ile Val Val His Glu Tyr Tyr Asn
                    405                    410                    415
Ser Gln Thr Phe Asp Tyr Asp Ile Ala Leu Leu Gln Leu Ser Ile Ala
                420                    425                    430
Trp Pro Glu Thr Leu Lys Gln Leu Ile Gln Pro Ile Cys Ile Pro Pro
                435                    440                    445
Thr Gly Gln Arg Val Arg Ser Gly Glu Lys Cys Trp Val Thr Gly Trp
                450                    455                    460
Gly Arg Arg His Glu Ala Asp Asn Lys Gly Ser Leu Val Leu Gln Gln
465                    470                    475                    480
Ala Glu Val Glu Leu Ile Asp Gln Thr Leu Cys Val Ser Thr Tyr Gly
                485                    490                    495
Ile Ile Thr Ser Arg Met Leu Cys Ala Gly Ile Met Ser Gly Lys Arg
                500                    505                    510
Asp Ala Cys Lys Gly Asp Ser Gly Gly Pro Leu Ser Cys Arg Arg Lys
                515                    520                    525
Ser Asp Gly Lys Trp Ile Leu Thr Gly Ile Val Ser Trp Gly His Gly
                530                    535                    540
Cys Gly Arg Pro Asn Phe Pro Gly Val Tyr Thr Arg Val Ser Asn Phe
545                    550                    555                    560
Val Pro Trp Ile His Lys Tyr Val Pro Ser Leu Leu
                565                    570
```

<210> 4830
<211> 134
<212> PRT
<213> Homo sapiens

<400> 4830
Met Val Gly Leu Leu Phe His Ala Pro Lys Ala Pro Glu Met Ala Pro
1   5   10   15
Leu Arg Cys Cys Ile Met Asn Lys Ile Ile Met Val Arg Arg Pro Lys
                20   25   30
Gln Ser Thr Ala Asp Tyr Gly Met Arg Thr Ser Gly Pro Val Glu Ser
                35   40   45
Gly Leu Ser Ala Asp Ser Leu Gln Leu Leu Cys Ser Tyr Ala Ala Ile
        50   55   60
Lys Asn Ser Ala Glu Leu Leu Met Val Gly Pro Gln Gly Met Arg Pro
65   70   75   80
Ala Thr Gly Gln Asp Leu Leu Cys Arg Pro Cys Leu Ser His Asp Leu
                85   90   95
Pro Gly Pro Leu His Pro Pro Arg Gly Leu Ser Gly Ser Ser Ser Leu
                100   105   110
Leu Ile Ser Pro Arg Leu Gln Asp Val Ser Leu Gln Leu Val His Pro
                115   120   125
Thr Pro Glu Glu Ser Phe
        130

<210> 4831
<211> 184
<212> PRT
<213> Homo sapiens

<400> 4831
Met Pro Phe Arg Lys Ala Cys Gly Pro Lys Leu Thr Asn Ser Pro Thr
1   5   10   15
Val Ile Val Met Val Gly Leu Pro Ala Arg Gly Lys Thr Tyr Ile Ser

```
                 20                      25                      30
Lys Lys Leu Thr Arg Tyr Leu Tyr Trp Ile Gly Val Pro Thr Lys Val
            35                      40                      45
Phe Asn Val Gly Glu Tyr Arg Arg Glu Ala Val Lys Gln Tyr Ser Ser
        50                      55                      60
Tyr Asn Phe Phe Arg Pro Asp Asn Glu Glu Ala Met Lys Val Arg Lys
65                      70                      75                      80
Gln Cys Ala Leu Ala Ala Leu Arg Asp Val Lys Ser Tyr Leu Ala Lys
                85                      90                      95
Glu Gly Gly Gln Ile Ala Val Phe Asp Ala Thr Asn Thr Thr Arg Glu
                100                     105                     110
Arg Arg His Met Ile Leu His Phe Ala Lys Glu Asn Asp Phe Lys Ala
            115                     120                     125
Phe Phe Ile Glu Ser Val Cys Asp Asp Pro Thr Val Val Ala Ser Asn
        130                     135                     140
Ile Met Gln Lys Ala Phe Gln Arg Asp Leu Ser Ala Thr Pro Leu Trp
145                     150                     155                     160
Cys Cys Arg Lys Leu Lys Ser Pro Ala Arg Ile Thr Lys Thr Ala Thr
                165                     170                     175
Arg Gln Lys Pro Trp Thr Thr Ser
                180
```

<210> 4832
<211> 493
<212> PRT
<213> Homo sapiens

<400> 4832
```
Met Gly Pro Thr Ser Val Leu Arg Ala Gly Leu Thr Pro Ser Cys Leu
1               5                       10                      15
Pro Pro Pro Ser Gly Ala Thr Asn Gly Ser Val Ser Pro Leu Gly Arg
            20                      25                      30
Ala Gln Arg Val Trp Thr Glu Pro Gly Gly Arg Gly Leu His Gly Ala
            35                      40                      45
Thr Ala Ala Gly Pro Val Ala Ala Ala Cys Pro Leu Leu Ala Val Thr
```

```
                50                      55                     60
Ala Thr Ala Pro Gly Gln Pro Ser Gly Ala Ser Thr Val Trp Val Arg
65                      70                     75                     80
Glu Gly Gly Thr Ala Pro Ala Thr Arg Met Thr Val Pro Leu Ala Pro
                        85                     90                     95
Arg Thr Ser Glu Lys Cys Ser Val Leu Asn Leu Thr Ala Ser Leu Ser
                        100                    105                    110
Val Gly Asn Ser Thr Ser Gly Lys Arg Thr Gly Glu Ala Cys Ser Leu
                        115                    120                    125
Thr Cys Leu Ala Glu Gly Phe Asn Phe Tyr Thr Glu Arg Ala Ala Ala
                130                    135                    140
Val Val Asp Gly Thr Pro Cys Arg Pro Asp Thr Val Asp Ile Cys Val
145                     150                    155                    160
Ser Gly Glu Cys Lys His Val Gly Cys Asp Arg Val Leu Gly Ser Asp
                        165                    170                    175
Leu Arg Glu Asp Lys Cys Arg Val Cys Gly Gly Asp Gly Ser Ala Cys
                        180                    185                    190
Glu Thr Ile Glu Gly Val Phe Ser Pro Ala Ser Pro Gly Ala Gly Tyr
                        195                    200                    205
Glu Asp Val Val Trp Ile Pro Lys Gly Ser Val His Ile Phe Ile Gln
                210                    215                    220
Asp Leu Asn Leu Ser Leu Asn His Leu Ala Leu Lys Gly Asp Gln Glu
225                     230                    235                    240
Ser Leu Leu Leu Glu Gly Leu Pro Gly Thr Pro Gln Pro His Arg Leu

                245                    250                    255
Pro Leu Ala Gly Thr Thr Phe Gln Leu Arg Gln Gly Pro Asp Gln Val
                        260                    265                    270
Gln Ser Leu Glu Ala Leu Gly Pro Ile Asn Ala Ser Leu Ile Val Met
                        275                    280                    285
Val Leu Ala Arg Thr Glu Leu Pro Ala Leu Arg Tyr Arg Phe Asn Ala
                290                    295                    300
Pro Ile Ala Arg Asp Ser Leu Pro Pro Tyr Ser Trp His Tyr Ala Pro
305                     310                    315                    320
Trp Thr Arg Cys Ser Ala Gln Cys Ala Gly Gly Ser Gln Val Gln Ala
                        325                    330                    335
```

Val Glu Cys Arg Asn Gln Leu Asp Gly Ser Ala Val Ala Pro His Tyr
          340   345   350

Cys Ser Ala His Ser Lys Leu Pro Lys Arg Gln Arg Ala Cys Asn Thr
          355   360   365

Glu Pro Cys Pro Pro Asp Trp Val Val Gly Asn Trp Ser Leu Cys Ser
        370   375   380

Arg Ser Cys Asp Ala Gly Val Arg Ser Arg Ser Val Val Cys Gln Arg
385   390   395   400

Arg Val Ser Ala Ala Glu Glu Lys Ala Leu Asp Asp Ser Ala Cys Pro
               405   410   415

Gln Pro Arg Pro Pro Val Leu Glu Ala Cys His Gly Pro Thr Cys Pro
            420   425   430

Pro Glu Trp Ala Ala Leu Asp Trp Ser Glu Cys Thr Pro Ser Cys Gly
          435   440   445

Pro Gly Leu Arg His Arg Val Val Leu Cys Lys Ser Ala Asp His Arg
        450   455   460

Ala Thr Leu Pro Pro Ala His Cys Ser Pro Ala Ala Lys Pro Pro Ala
465   470   475   480

Thr Met Arg Cys Asn Leu Arg Arg Cys Pro Pro Ala Arg
          485   490

<210> 4833

<211> 803

<212> PRT

<213> Homo sapiens

<400> 4833

Met Ile Ser Ala Gln Cys Asn Leu Cys Leu Pro Gly Ser Gly Asp Ser
 1   5   10   15

Cys Ala Ser Gly Ser Gln Leu Ala Gly Thr Thr Val Ala Gly Pro Ala
          20   25   30

His Pro Glu Ser Leu Thr Leu Cys Ser Gly Glu Ala Glu Arg Arg Gly
          35   40   45

Lys Glu Glu Trp Pro Asp Ser His His Tyr Pro Gly Pro Thr Pro Ala
        50   55   60

Pro Glu Ser Ser Asp Gly Pro His Lys Val Thr Val Leu Ala Thr Met
65   70   75   80

Leu Ser Ser Arg Trp Trp Pro Ser Ser Trp Gly Ile Leu Gly Leu Gly
                 85   90   95

Pro Arg Ser Pro Pro Arg Gly Ser Gln Leu Cys Ala Leu Tyr Ala Phe
             100   105   110

Thr Tyr Thr Gly Ala Asp Gly Gln Gln Val Ser Leu Ala Glu Gly Asp
         115   120   125

Arg Phe Leu Leu Leu Arg Lys Thr Asn Ser Asp Trp Trp Leu Ala Arg
     130   135   140

Arg Leu Glu Ala Pro Ser Thr Ser Arg Pro Ile Phe Val Pro Ala Ala
145   150   155   160

Tyr Met Ile Glu Glu Ser Ile Pro Ser Gln Ser Pro Thr Thr Val Ile
             165   170   175

Pro Gly Gln Leu Leu Trp Thr Pro Gly Pro Lys Leu Phe His Gly Ser
             180   185   190

Leu Glu Glu Leu Ser Gln Ala Leu Pro Ser Arg Ala Gln Ala Ser Ser
             195   200   205

Glu Gln Pro Pro Pro Leu Pro Arg Lys Met Cys Arg Ser Val Ser Thr
     210   215   220

Asp Asn Leu Ser Pro Ser Leu Leu Lys Pro Phe Gln Glu Gly Pro Ser
225   230   235   240

Gly Arg Ser Leu Ser Gln Glu Asn Leu Pro Pro Glu Ala Ser Ala Ser
             245   250   255

Thr Ala Gly Pro Gln Pro Leu Met Ser Glu Pro Pro Val Tyr Cys Asn
             260   265   270

Leu Val Asp Leu Arg Arg Cys Pro Arg Ser Pro Pro Pro Gly Pro Ala
     275   280   285

Cys Pro Leu Leu Gln Arg Pro Asp Ala Trp Glu Gln His Leu Asp Pro
     290   295   300

Asn Ser Gly Arg Cys Phe Tyr Ile Asn Ser Leu Thr Gly Cys Lys Ser
305   310   315   320

Trp Lys Pro Pro Arg Arg Ser Arg Ser Glu Thr Asn Pro Gly Ser Met
             325   330   335

Glu Gly Thr Gln Thr Leu Lys Arg Asn Asn Asp Val Leu Gln Pro Gln
             340   345   350

Ala Lys Gly Phe Arg Ser Asp Thr Gly Thr Pro Glu Pro Leu Asp Pro
        355   360   365

Gln Gly Ser Leu Ser Leu Ser Gln Arg Thr Ser Gln Leu Asp Pro Pro
        370   375   380

Ala Leu Gln Ala Pro Arg Pro Leu Pro Gln Leu Leu Asp Asp Pro His
385   390   395   400

Glu Val Glu Lys Ser Gly Leu Leu Asn Met Thr Lys Ile Ala Gln Gly
                405   410   415

Gly Arg Lys Leu Arg Lys Asn Trp Gly Pro Ser Trp Val Val Leu Thr
                420   425   430

Gly Asn Ser Leu Val Phe Tyr Arg Glu Pro Pro Pro Thr Ala Pro Ser
                435   440   445

Ala Gly Trp Gly Pro Ala Gly Ser Arg Pro Glu Ser Ser Val Asp Leu
        450   455   460

Arg Gly Ala Ala Leu Ala His Gly Arg His Leu Ser Ser Arg Arg Asn
465   470   475   480

Val Leu His Ile Arg Thr Ile Pro Gly His Glu Phe Leu Leu Gln Ser
                485   490   495

Asp His Glu Thr Glu Leu Arg Ala Trp His Arg Ala Leu Arg Thr Val
        500   505   510

Ile Glu Arg Leu Asp Arg Glu Asn Pro Leu Glu Leu Arg Leu Ser Gly
        515   520   525

Ser Gly Pro Ala Glu Leu Ser Ala Gly Glu Asp Glu Glu Glu Glu Ser
        530   535   540

Glu Leu Val Ser Lys Pro Leu Leu Arg Leu Ser Ser Arg Arg Ser Ser
545   550   555   560

Ile Arg Gly Pro Glu Gly Thr Glu Gln Asn Arg Val Arg Asn Lys Leu
                565   570   575

Lys Arg Leu Ile Ala Lys Arg Pro Pro Leu Gln Ser Leu Gln Glu Arg
                580   585   590

Gly Leu Leu Arg Asp Gln Val Phe Gly Cys Gln Leu Glu Ser Leu Cys
        595   600   605

Gln Arg Glu Gly Asp Thr Val Pro Ser Phe Leu Arg Leu Cys Ile Ala
        610   615   620

Ala Val Asp Lys Arg Gly Leu Asp Val Asp Gly Ile Tyr Arg Val Ser
625   630   635   640

Gly Asn Leu Ala Val Val Gln Lys Leu Arg Phe Leu Val Asp Arg Glu
                    645   650   655

Arg Ala Val Thr Ser Asp Gly Arg Tyr Val Phe Pro Glu Gln Pro Gly
                660   665   670

Gln Glu Gly Arg Leu Asp Leu Asp Ser Thr Glu Trp Asp Asp Ile His
            675   680   685

Val Val Thr Gly Ala Leu Lys Leu Phe Leu Arg Glu Leu Pro Gln Pro
        690   695   700

Leu Val Pro Pro Leu Leu Leu Pro His Phe Arg Ala Ala Leu Ala Leu
705   710   715   720

Ser Gln Ile Gln Glu Leu Ile Gly Ser Met Pro Lys Pro Asn His Asp
                725   730   735

Thr Leu Arg Tyr Leu Leu Glu His Leu Cys Arg Val Ile Ala His Ser
                740   745   750

Asp Lys Asn Arg Met Thr Pro His Asn Leu Gly Ile Val Phe Gly Pro
            755   760   765

Thr Leu Phe Arg Pro Glu Gln Glu Thr Ser Asp Pro Ala Ala His Ala
        770   775   780

Leu Tyr Pro Gly Gln Leu Val Gln Leu Met Leu Thr Asn Phe Thr Ser
785   790   795   800

Leu Phe Pro

<210> 4834

<211> 892

<212> PRT

<213> Homo sapiens

<400> 4834

Met Gln Asp Leu Lys Lys Tyr Lys Lys Lys Gln Lys Arg Met Lys
  1   5   10   15

Ser Arg Lys Val Arg Lys Pro Thr Glu Asn Gln Glu Lys Asn Ile Arg
                20   25   30

Lys Arg Glu Arg Arg Lys Lys Ser Lys Arg Arg Lys Arg Glu Lys His
            35   40   45

Lys His Asn Ser Pro Ser Ser Asp Asp Ser Ser Asp Tyr Ser Leu Asp
    50   55   60

Ser Asp Val Glu His Thr Glu Ser Ser His Lys Lys Arg Thr Gly Phe
65   70   75   80

Tyr Arg Asp Tyr Asp Ile Pro Phe Thr Gln Arg Gly His Ile Ser Gly
           85   90   95

Ser Tyr Ile Thr Ser Lys Lys Gly Gln His Asn Lys Lys Phe Lys Ser
        100   105   110

Lys Glu Tyr Asp Glu Tyr Ser Thr Tyr Ser Asp Asp Asn Phe Gly Asn
        115   120   125

Tyr Ser Asp Asp Asn Phe Gly Asn Tyr Gly Gln Glu Thr Glu Glu Asp
        130   135   140

Phe Ala Asn Gln Leu Lys Gln Tyr Arg Gln Ala Lys Glu Thr Ser Asn
145   150   155   160

Ile Ala Leu Gly Ser Ser Phe Ser Lys Glu Ser Gly Lys Lys Gln Arg
        165   170   175

Met Lys Gly Val Gln Gln Gly Ile Glu Gln Arg Val Lys Ser Phe Asn
        180   185   190

Val Gly Arg Gly Arg Gly Leu Pro Lys Lys Ile Lys Arg Lys Glu Arg
        195   200   205

Gly Gly Arg Thr Asn Lys Gly Pro Asn Val Phe Ser Val Ser Asp Asp
        210   215   220

Phe Gln Glu Tyr Asn Lys Pro Gly Lys Lys Trp Lys Val Met Thr Gln
225   230   235   240

Glu Phe Ile Asn Gln His Thr Val Glu His Lys Gly Lys Gln Ile Cys
        245   250   255

Lys Tyr Phe Leu Glu Gly Arg Cys Ile Lys Gly Asp Gln Cys Lys Phe
        260   265   270

Asp His Asp Ala Glu Leu Glu Lys Arg Lys Glu Ile Cys Lys Phe Tyr
        275   280   285

Leu Gln Gly Tyr Cys Thr Lys Gly Glu Asn Cys Ile Tyr Met His Asn
        290   295   300

Glu Phe Pro Cys Lys Phe Tyr His Ser Gly Ala Lys Cys Tyr Gln Gly
305   310   315   320

Asp Asn Cys Lys Phe Ser His Asp Asp Leu Thr Lys Glu Thr Lys Lys
        325   330   335

```
Leu Leu Asp Lys Val Leu Asn Thr Asp Glu Glu Leu Ile Asn Glu Asp
            340             345             350

Glu Arg Glu Leu Glu Glu Leu Arg Lys Arg Gly Ile Thr Pro Leu Pro
            355             360             365

Lys Pro Pro Pro Gly Val Gly Leu Leu Pro Thr Pro Pro Glu His Phe
    370             375             380

Pro Phe Ser Asp Pro Glu Asp Asp Phe Gln Thr Asp Phe Ser Asp Asp
385             390             395             400

Phe Arg Lys Ile Pro Ser Leu Phe Glu Ile Val Val Lys Pro Thr Val
            405             410             415

Asp Leu Ala His Lys Ile Gly Arg Lys Pro Pro Ala Phe Tyr Thr Ser
            420             425             430

Ala Ser Pro Pro Gly Pro Gln Phe Gln Gly Ser Ser Pro His Pro Gln
            435             440             445

His Ile Tyr Ser Ser Gly Ser Ser Pro Gly Pro Gly Pro Asn Met Ser
    450             455             460

Gln Gly His Ser Ser Pro Val Met His Pro Gly Ser Pro Gly His His
465             470             475             480

Pro Cys Ala Gly Pro Pro Gly Leu Pro Val Pro Gln Ser Pro Pro Leu
            485             490             495

Pro Pro Gly Pro Pro Glu Ile Val Gly Pro Gln Asn Gln Ala Gly Val
            500             505             510

Leu Val Gln Pro Asp Thr Ser Leu Thr Pro Pro Ser Met Gly Gly Ala
            515             520             525

Tyr His Ser Pro Gly Phe Pro Gly His Val Met Lys Val Pro Arg Glu
            530             535             540

Asn His Cys Ser Pro Gly Ser Ser Tyr Gln Gln Ser Pro Gly Glu Met
545             550             555             560

Gln Leu Asn Thr Asn Tyr Glu Ser Leu Gln Asn Pro Ala Glu Phe Tyr
            565             570             575

Asp Asn Tyr Tyr Ala Gln His Ser Ile His Asn Phe Gln Pro Pro Asn
            580             585             590

Asn Ser Gly Asp Gly Met Trp His Gly Glu Phe Ala Gln Gln Gln Pro
            595             600             605

Pro Val Val Gln Asp Ser Pro Asn His Gly Ser Gly Ser Asp Gly Ser
    610             615             620
```

Ser Thr Arg Thr Gly His Gly Pro Leu Pro Val Pro Gly Leu Leu Pro
625   630   635   640

Ala Val Gln Arg Ala Leu Phe Val Arg Leu Thr Gln Arg Tyr Gln Glu
                645   650   655

Asp Glu Glu Gln Thr Ser Thr Gln Pro His Arg Ala Pro Ser Lys Glu
             660   665   670

Glu Asp Asp Thr Val Asn Trp Tyr Ser Ser Ser Glu Glu Glu Glu Gly
             675   680   685

Ser Ser Val Lys Ser Ile Leu Lys Thr Leu Gln Lys Gln Thr Glu Thr
             690   695   700

Leu Arg Asn Gln Gln Gln Pro Ser Thr Glu Leu Ser Thr Pro Thr Asp
705   710   715   720

Pro Arg Leu Ala Lys Glu Lys Ser Lys Gly Asn Gln Val Val Asp Pro
             725   730   735

Arg Leu Arg Thr Ile Pro Arg Gln Asp Ile Arg Lys Pro Ser Glu Ser
             740   745   750

Ala Pro Leu Asp Leu Arg Leu Ala Trp Asp Pro Arg Lys Leu Arg Gly
             755   760   765

Asn Gly Ser Gly His Ile Gly Ser Ser Val Gly Gly Ala Lys Phe Asp
             770   775   780

Leu His His Ala Asn Ala Gly Thr Asn Val Lys His Lys Arg Gly Asp
785   790   795   800

Asp Asp Asp Glu Asp Thr Glu Arg Glu Leu Gly Glu Lys Ala Phe Leu
             805   810   815

Ile Pro Leu Asp Ala Ser Pro Gly Ile Met Leu Gln Asp Pro Arg Ser
             820   825   830

Gln Leu Arg Gln Phe Ser His Ile Lys Lys Asp Ile Thr Leu Thr Lys
             835   840   845

Pro Asn Phe Ala Lys His Ile Val Trp Ala Pro Glu Asp Leu Leu Pro

             850   855   860

Val Pro Leu Pro Lys Pro Asp Pro Val Ser Ser Ile Asn Leu Pro Leu
865   870   875   880

Pro Pro Leu Ile Ala Asp Gln Arg Leu Asn Arg Leu
             885   890

<210> 4835

<211> 891

<212> PRT

<213> Homo sapiens

<400> 4835

```
Met Ala Leu Thr Gln Gly Pro Leu Thr Phe Arg Asp Val Ala Ile Glu
1               5                   10                  15
Phe Ser Gln Glu Glu Trp Lys Ser Leu Asp Pro Val Gln Lys Ala Leu
                20                  25                  30
Tyr Trp Asp Val Met Leu Glu Asn Tyr Arg Asn Leu Val Phe Leu Gly
            35                  40                  45
Ile Leu Pro Lys Cys Met Thr Lys Glu Leu Pro Pro Ile Gly Asn Ser
        50                  55                  60
Asn Thr Gly Glu Lys Cys Gln Thr Val Thr Leu Glu Arg His Glu Cys
65                  70                  75                  80
Tyr Asp Val Glu Asn Phe Tyr Leu Arg Glu Ile Gln Lys Asn Leu Gln
                85                  90                  95
Asp Leu Glu Phe Gln Trp Lys Asp Gly Glu Ile Asn Tyr Lys Glu Val
                100                 105                 110
Pro Met Thr Tyr Lys Asn Asn Leu Asn Gly Lys Arg Gly Gln His Ser
            115                 120                 125
Gln Glu Asp Val Glu Asn Lys Cys Ile Glu Asn Gln Leu Thr Leu Ser
        130                 135                 140
Phe Gln Ser Arg Leu Thr Glu Leu Gln Lys Phe Gln Thr Glu Gly Lys
145                 150                 155                 160
Ile Tyr Glu Cys Asn Gln Ser Glu Lys Thr Val Asn Asn Ser Ser Leu
                165                 170                 175
Val Ser Pro Leu Gln Arg Ile Leu Pro Ser Val Gln Thr Asn Ile Ser
            180                 185                 190
Lys Lys Tyr Glu Asn Glu Phe Leu Gln Leu Ser Leu Pro Thr Gln Leu
            195                 200                 205
Glu Lys Thr His Ile Arg Glu Lys Pro Tyr Ile Cys Lys Gly Cys Gly
        210                 215                 220
Lys Ala Phe Arg Val Ser Ser Ser Leu Ile Asn His Gln Met Val His
```

```
225                230                   235                240
Thr Thr Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe His
                245                250                255
Arg Gly Ser Leu Leu Thr Ile His Gln Ile Val His Thr Arg Gly Lys
                260                265                270
Pro Tyr Gln Cys Gly Val Cys Gly Lys Ile Phe Arg Gln Asn Ser Asp
            275                280                285
Leu Val Asn His Arg Arg Ser His Thr Gly Glu Lys Pro Tyr Lys Cys
        290                295                300
Asn Glu Cys Gly Lys Ser Phe Ser Gln Ser Tyr Asn Leu Ala Ile His
305                310                315                320
Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly
                325                330                335
Lys Thr Phe Lys Gln Gly Ser Cys Leu Thr Thr His Gln Ile Ile His
                340                345                350
Thr Gly Glu Lys Pro Tyr Gln Cys Asp Ile Cys Gly Lys Val Phe Arg
            355                360                365
Gln Asn Ser Asn Leu Val Asn His Gln Arg Ile His Thr Gly Glu Lys
        370                375                380
Pro Tyr Lys Cys Asn Ile Cys Gly Lys Ser Phe Ser Gln Ser Ser Asn
385                390                395                400
Leu Ala Thr His Gln Thr Val His Ser Gly Asn Lys Pro Tyr Lys Cys
                405                410                415
Asp Glu Cys Gly Lys Thr Phe Lys Arg Ser Ser Ser Leu Thr Thr His
                420                425                430
Gln Val Ile His Thr Gly Glu Lys Pro Tyr Thr Cys Asp Val Cys Asp
            435                440                445
Lys Val Phe Ser Gln Arg Ser Gln Leu Ala Arg His Gln Arg Gly His
            450                455                460
Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Ser
465                470                475                480
Gln Thr Ser His Leu Val Gly His Arg Arg Ile His Thr Gly Glu Lys
                485                490                495
Pro Tyr Lys Cys Asp Lys Cys Gly Lys Ala Phe Lys Gln Gly Ser Leu
            500                505                510
Leu Thr Arg His Lys Ile Ile His Thr Arg Glu Lys Arg Tyr Gln Cys
```

```
                515                      520                      525
Gly Glu Cys Gly Lys Val Phe Ser Glu Asn Ser Cys Leu Val Arg His
            530                      535                      540
Leu Arg Ile His Thr Gly Glu Gln Pro Tyr Lys Cys Asn Val Cys Gly
545                      550                      555                      560
Lys Val Phe Asn Tyr Ser Gly Asn Leu Ser Ile His Lys Arg Ile Arg
                    565                      570                      575
Thr Gly Glu Lys Pro Phe Gln Cys Asn Glu Cys Gly Thr Val Phe Arg
                580                      585                      590
Asn Tyr Ser Cys Leu Ala Arg His Leu Arg Ile His Thr Gly Gln Lys
                595                      600                      605
Pro Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Asn Asp Ser Gly Asn
                610                      615                      620
Leu Ser Asn His Lys Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys
625                      630                      635                      640
Asn Glu Cys Gly Lys Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His
                    645                      650                      655
Arg Lys Ile His Ala Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly
                660                      665                      670
Lys Ala Tyr Thr Gln Arg Ser Ser Leu Thr Lys His Leu Ile Ile His
                675                      680                      685
Thr Gly Glu Lys Pro Tyr Asn Cys Asn Glu Phe Gly Gly Ala Phe Ile
                690                      695                      700
Gln Ser Ser Lys Leu Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys
705                      710                      715                      720
Pro His Lys Cys Ser His Cys Gly Arg Thr Phe Ser His Ile Thr Gly
                    725                      730                      735
Leu Thr Tyr His Gln Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys
                740                      745                      750
Ile Glu Cys Gly Gln Val Phe Asn Ser Thr Ser Asn Leu Ala Arg His
                755                      760                      765
Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly
                770                      775                      780
Lys Val Phe Arg His Gln Ser Thr Leu Ala Arg His Arg Ser Ile His
785                      790                      795                      800
Thr Gly Glu Lys Pro Tyr Val Cys Ser Glu Cys Gly Lys Ala Phe Arg
```

```
                805                    810                    815
Val Arg Ser Ile Leu Val Asn His Gln Lys Met His Thr Gly Asp Lys
                820                825                830
Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ile Glu Arg Ser Lys
            835                840                845
Leu Val Tyr His Gln Arg Asn His Thr Gly Glu Lys Pro Tyr Lys Cys
        850                855                860
Ile Glu Cys Gly Lys Ala Phe Gly Arg Phe Ser Cys Leu Asn Lys His
865                870                875                880
Gln Met Ile His Ser Gly Glu Lys Pro Tyr Lys
                885                890
```

<210> 4836

<211> 374

<212> PRT

<213> Homo sapiens

<400> 4836

```
Met Ile Glu Tyr Gln Ile Pro Val Ser Phe Lys Asp Val Val Val Gly
 1               5                    10                   15
Phe Thr Gln Glu Glu Trp His Arg Leu Ser Pro Ala Gln Arg Ala Leu
                20                25                30
Tyr Arg Asp Val Met Leu Glu Thr Tyr Ser Asn Leu Ala Ser Val Gly
            35                40                 ·45
Tyr Glu Gly Thr Lys Pro Asp Val Ile Leu Arg Leu Glu Gln Glu Glu
        50                55                60
Ala Pro Trp Ile Gly Glu Ala Ala Cys Pro Gly Cys His Cys Trp Glu
65                70                75                80
Asp Ile Trp Arg Val Asn Ile Gln Arg Lys Arg Arg Gln Asp Met Leu
                85                90                95
Leu Arg Pro Gly Ala Ala Ile Ser Lys Lys Thr Leu Pro Lys Glu Lys
            100                105                110
Ser Cys Glu Tyr Asn Lys Phe Gly Lys Ile Ser Leu Leu Ser Thr Asp
        115                120                125
Leu Phe Ser Ser Ile Gln Ser Pro Ser Asn Trp Asn Pro Cys Gly Lys
```

```
                130                       135                       140
Asn Leu Asn His Asn Leu Asp Leu Ile Gly Phe Lys Arg Asn Cys Ala
145                       150                       155                       160
Lys Lys Gln Asp Glu Cys Tyr Ala Tyr Gly Lys Leu Leu Gln Arg Ile
                          165                       170                       175
Asn His Gly Arg Arg Pro Asn Gly Glu Lys Pro Arg Gly Cys Ser His
                180                       185                       190
Cys Glu Lys Ala Phe Thr Gln Asn Pro Ala Leu Met Tyr Lys Pro Ala
                195                       200                       205
Val Ser Asp Ser Leu Leu Tyr Lys Arg Lys Arg Val Pro Pro Thr Glu
            210                       215                       220
Lys Pro His Val Cys Ser Glu Cys Gly Lys Ala Phe Cys Tyr Lys Ser
225                       230                       235                       240
Glu Phe Ile Arg His Gln Arg Ser His Thr Gly Glu Lys Pro Tyr Gly
                          245                       250                       255
Cys Thr Asp Cys Gly Lys Ala Phe Ser His Lys Ser Thr Leu Ile Lys
                260                       265                       270
His Gln Arg Ile His Thr Gly Val Arg Pro Phe Glu Cys Phe Phe Cys
                275                       280                       285
Gly Lys Ala Phe Thr Gln Lys Ser His Arg Thr Glu His Gln Arg Thr
            290                       295                       300
His Thr Gly Glu Arg Pro Phe Val Cys Ser Glu Cys Gly Lys Ser Phe
305                       310                       315                       320
Gly Glu Lys Ser Tyr Leu Asn Val His Arg Lys Met His Thr Gly Glu
                          325                       330                       335
Arg Pro Tyr Arg Cys Arg Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser
                340                       345                       350
Cys Leu Asn Lys His Trp Arg Thr His Phe Gly Glu Ser Ser Leu Arg
                355                       360                       365
Ser Lys Ser Ser Asn Thr
                370
```

<210> 4837

<211> 896

<212> PRT

<213> Homo sapiens

<400> 4837

Met Thr Glu Glu Ser Glu Glu Thr Val Leu Tyr Ile Glu His Arg Tyr
1   5   10   15

Val Cys Ser Glu Cys Asn Gln Leu Tyr Gly Ser Leu Glu Glu Val Leu
                20   25   30

Met His Gln Asn Ser His Val Pro Gln Gln His Phe Glu Leu Val Gly
            35   40   45

Val Ala Asp Pro Gly Val Thr Val Ala Thr Asp Thr Ala Ser Gly Thr
        50   55   60

Gly Leu Tyr Gln Thr Leu Val Gln Glu Ser Gln Tyr Gln Cys Leu Glu
65   70   75   80

Cys Gly Gln Leu Leu Met Ser Pro Ser Gln Leu Leu Glu His Gln Glu
                85   90   95

Leu His Leu Lys Met Met Ala Pro Gln Glu Ala Val Pro Ala Glu Pro
                100   105   110

Ser Pro Lys Ala Pro Pro Leu Ser Ser Ser Thr Ile His Tyr Glu Cys
            115   120   125

Val Asp Cys Lys Ala Leu Phe Ala Ser Gln Glu Leu Trp Leu Asn His
        130   135   140

Arg Gln Thr His Leu Arg Ala Thr Pro Thr Lys Ala Pro Ala Pro Val
145   150   155   160

Val Leu Gly Ser Pro Val Val Leu Gly Pro Pro Val Gly Gln Ala Arg
                165   170   175

Val Ala Val Glu His Ser Tyr Arg Lys Ala Glu Glu Gly Gly Glu Gly
                180   185   190

Ala Thr Val Pro Ser Ala Ala Ala Thr Thr Thr Glu Val Val Thr Glu
            195   200   205

Val Glu Leu Leu Leu Tyr Lys Cys Ser Glu Cys Ser Gln Leu Phe Gln

        210   215   220

Leu Pro Ala Asp Phe Leu Glu His Gln Ala Thr His Phe Pro Ala Pro
225   230   235   240

Val Pro Glu Ser Gln Glu Pro Ala Leu Gln Gln Glu Val Gln Ala Ser
                245   250   255

Ser Pro Ala Glu Val Pro Val Ser Gln Pro Asp Pro Leu Pro Ala Ser
            260   265   270

Asp His Ser Tyr Glu Leu Arg Asn Gly Glu Ala Ile Gly Arg Asp Arg
            275   280   285

Arg Gly Arg Arg Ala Arg Arg Asn Asn Ser Gly Glu Ala Gly Gly Ala
            290   295   300

Ala Thr Gln Glu Leu Phe Cys Ser Ala Cys Asp Gln Leu Phe Leu Ser
305   310   315   320

Pro His Gln Leu Gln Gln His Leu Arg Ser His Arg Glu Gly Val Phe
                325   330   335

Lys Cys Pro Leu Cys Ser Arg Val Phe Pro Ser Pro Ser Ser Leu Asp
            340   345   350

Gln His Leu Gly Asp His Ser Ser Glu Ser His Phe Leu Cys Val Asp
            355   360   365

Cys Gly Leu Ala Phe Gly Thr Glu Ala Leu Leu Leu Ala His Arg Arg
            370   375   380

Ala His Thr Pro Asn Pro Leu His Ser Cys Pro Cys Gly Lys Thr Phe
385   390   395   400

Val Asn Leu Thr Lys Phe Leu Tyr His Arg Arg Thr His Gly Val Gly
                405   410   415

Gly Val Pro Leu Pro Thr Thr Pro Val Pro Pro Glu Glu Pro Val Ile
            420   425   430

Gly Phe Pro Glu Pro Ala Pro Ala Glu Thr Gly Glu Pro Glu Ala Pro
            435   440   445

Glu Pro Pro Val Ser Glu Glu Thr Ser Ala Gly Pro Ala Ala Pro Gly
            450   455   460

Thr Tyr Arg Cys Leu Leu Cys Ser Arg Glu Phe Gly Lys Ala Leu Gln
465   470   475   480

Leu Thr Arg His Gln Arg Phe Val His Arg Leu Glu Arg Arg His Lys
                485   490   495

Cys Ser Ile Cys Gly Lys Met Phe Lys Lys Lys Ser His Val Arg Asn
            500   505   510

Arg Leu Arg Thr His Thr Gly Glu Arg Pro Phe Pro Cys Pro Asp Cys
            515   520   525

Ser Lys Pro Phe Asn Ser Pro Ala Asn Leu Ala Arg His Arg Leu Thr
            530   535   540

His Thr Gly Glu Arg Pro Tyr Arg Cys Gly Asp Cys Gly Lys Ala Phe
545   550   555   560

Thr Gln Ser Ser Thr Leu Arg Gln His Arg Leu Val His Ala Gln His
                565   570   575

Phe Pro Tyr Arg Cys Gln Glu Cys Gly Val Arg Phe His Arg Pro Tyr
            580   585   590

Arg Leu Leu Met His Arg Tyr His His Thr Gly Glu Tyr Pro Tyr Lys
        595   600   605

Cys Arg Glu Cys Pro Arg Ser Phe Leu Leu Arg Arg Leu Leu Glu Val
        610   615   620

His Gln Leu Val Val His Ala Gly Arg Gln Pro His Arg Cys Pro Ser
625   630   635   640

Cys Gly Ala Ala Phe Pro Ser Ser Leu Arg Leu Arg Glu His Arg Cys
                645   650   655

Ala Ala Ala Ala Ala Gln Ala Pro Arg Arg Phe Glu Cys Gly Thr Cys
                660   665   670

Gly Lys Lys Val Gly Ser Ala Ala Arg Leu Gln Ala His Glu Ala Ala
                675   680   685

His Ala Ala Ala Gly Pro Gly Glu Val Leu Ala Lys Glu Pro Pro Ala
            690   695   700

Pro Arg Ala Pro Arg Ala Thr Arg Ala Pro Val Ala Ser Pro Ala Ala
705   710   715   720

Leu Gly Ser Thr Ala Thr Ala Ser Pro Ala Ala Pro Ala Arg Arg Arg
                725   730   735

Gly Leu Glu Cys Ser Glu Cys Lys Lys Leu Phe Ser Thr Glu Thr Ser
                740   745   750

Leu Gln Val His Arg Arg Ile His Thr Gly Glu Arg Pro Tyr Pro Cys
            755   760   765

Pro Asp Cys Gly Lys Ala Phe Arg Gln Ser Thr His Leu Lys Asp His
            770   775   780

Arg Arg Leu His Thr Gly Glu Arg Pro Phe Ala Cys Glu Val Cys Gly
785   790   795   800

Lys Ala Phe Ala Ile Ser Met Arg Leu Ala Glu His Arg Arg Ile His
                805   810   815

Thr Gly Glu Arg Pro Tyr Ser Cys Pro Asp Cys Gly Lys Ser Tyr Arg
            820   825   830

```
Ser Phe Ser Asn Leu Trp Lys His Arg Lys Thr His Gln Gln Gln His
        835                 840             845
Gln Ala Ala Val Arg Gln Gln Leu Ala Glu Ala Glu Ala Ala Val Gly
    850                 855             860
Leu Ala Val Met Glu Thr Ala Val Glu Ala Leu Pro Leu Val Glu Ala
865                 870             875                 880
Ile Glu Ile Tyr Pro Leu Ala Glu Ala Glu Gly Val Gln Ile Ser Gly
                885             890                 895
```

<210> 4838

<211> 464

<212> PRT

<213> Homo sapiens

<400> 4838

```
Met Phe Glu Asn Glu Ser Arg Lys Ile Phe Ser Glu Met Pro Glu Gly
  1                 5                 10              15
Glu Ser Ala Gln His Ser Asp Gly Glu Ser Asp Phe Glu Arg Asp Ala
                20                25              30
Gly Ile Gln Arg Leu Gln Gly His Thr Pro Gly Glu Asp His Gly Glu
        35                  40              45
Val Val Ser Gln Asp Arg Glu Val Gly Gln Leu Ile Gly Leu Gln Gly
    50                  55              60
Thr Tyr Leu Gly Glu Lys Pro Tyr Glu Cys Pro Gln Cys Gly Lys Thr
65                  70                  75                  80
Phe Ser Pro Lys Ser His Leu Ile Thr His Glu Arg Thr His Thr Gly
                85                  90                  95
Glu Lys Tyr Tyr Lys Cys Asp Glu Cys Gly Lys Ser Phe Ser Asp Gly
            100             105                 110
Ser Asn Phe Ser Arg His Gln Thr Thr His Thr Gly Glu Lys Pro Tyr
        115                 120                 125
Lys Cys Arg Asp Cys Gly Lys Ser Phe Ser Arg Ser Ala Asn Leu Ile
    130                 135                 140
Thr His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Ala Glu
145                 150                 155                 160
```

Cys Gly Lys Ser Phe Ser Arg Ser Pro Asn Leu Ile Ala His Gln Arg
                165   170   175

Thr His Thr Gly Glu Lys Pro Tyr Ser Cys Pro Glu Cys Gly Lys Ser
            180   185   190

Phe Gly Asn Arg Ser Ser Leu Asn Thr His Gln Gly Ile His Thr Gly
        195   200   205

Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Glu Ser Phe Ser Tyr Asn
    210   215   220

Ser Asn Leu Ile Arg His Gln Arg Ile His Thr Gly Glu Glu Pro Tyr
225   230   235   240

Lys Cys Thr Asp Cys Gly Gln Arg Phe Ser Gln Ser Ser Ala Leu Ile
            245   250   255

Thr His Arg Arg Thr His Thr Gly Glu Lys Pro Tyr Gln Cys Ser Glu
            260   265   270

Cys Gly Lys Ser Phe Ser Arg Ser Ser Asn Leu Ala Thr His Arg Arg
            275   280   285

Thr His Met Val Glu Lys Pro Tyr Lys Cys Gly Val Cys Gly Lys Ser
    290   295   300

Phe Ser Gln Ser Ser Ser Leu Ile Ala His Gln Gly Met His Thr Gly
305   310   315   320

Glu Lys Pro Tyr Glu Cys Leu Thr Cys Gly Glu Ser Phe Ser Trp Ser
            325   330   335

Ser Asn Leu Leu Lys His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr
            340   345   350

Lys Cys Ser Glu Cys Gly Lys Cys Phe Ser Gln Arg Ser Gln Leu Val
            355   360   365

Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Leu Met
    370   375   380

Cys Gly Lys Ser Phe Ser Arg Gly Ser Ile Leu Val Met His Gln Arg
385   390   395   400

Ala His Leu Gly Asp Lys Pro Tyr Arg Cys Pro Glu Cys Gly Lys Gly
            405   410   415

Phe Ser Trp Asn Ser Val Leu Ile Ile His Gln Arg Ile His Thr Gly
            420   425   430

Glu Lys Pro Tyr Lys Cys Pro Glu Cys Gly Lys Gly Phe Ser Asn Ser
            435   440   445

Ser Asn Phe Ile Thr His Gln Arg Thr His Met Lys Glu Lys Leu Tyr
   450   455   460

<210> 4839

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4839

Met Ser Gly Pro Gly Asn Lys Arg Ala Ala Gly Asp Gly Gly Ser Gly
1   5   10   15

Pro Pro Glu Lys Lys Leu Ser Arg Glu Glu Lys Thr Thr Thr Thr Leu
     20   25   30

Ile Glu Pro Ile Arg Leu Gly Gly Ile Ser Ser Thr Glu Glu Met Asp
     35   40   45

Leu Lys Val Leu Gln Phe Lys Asn Lys Lys Leu Ala Glu Arg Leu Glu
     50   55   60

Gln Arg Gln Ala Cys Glu Asp Glu Leu Arg Glu Arg Ile Glu Lys Leu
65   70   75   80

Glu Lys Arg Gln Ala Thr Asp Asp Ala Thr Leu Leu Ile Val Asn Arg
         85   90   95

Tyr Trp Ala Gln Leu Asp Glu Thr Val Glu Ala Leu Leu Arg Cys His
         100   105   110

Glu Ser Arg Ile Arg Glu Leu Glu Glu Arg Asp Arg Arg Glu Ser Lys
         115   120   125

Lys Ile Ala Asp Glu Asp Ala Leu Arg Arg Ile Arg Gln Ala Glu Glu
        130   135   140

Gln Ile Glu His Leu Gln Arg Lys Leu Gly Ala Thr Lys Gln Glu Glu
145   150   155   160

Glu Ala Leu Leu Ser Glu Met Asp Ala Gln Leu Leu Thr Val Gln Lys
         165   170   175

Leu Glu Glu Lys Glu Arg Ala Leu Gln Gly Ser Leu Gly Gly Val Glu
         180   185   190

Lys Glu Leu Thr Leu Arg Ser Gln Ala Leu Glu Leu Asn Lys Arg Lys
         195   200   205

Ala Val Glu Ala Ala Gln Leu Ala Glu Asp Leu Lys Val Gln Leu Glu
        210   215   220

His Val Gln Thr Arg Leu Arg Glu Ile Gln Pro Cys Leu Ala Glu Ser
225   230   235   240

Arg Ala Ala Arg Glu Lys Glu Ser Phe Asn Leu Lys Arg Ala Gln Glu
            245   250   255

Asp Ile Ser Arg Leu Arg Arg Lys Leu Glu Lys Gln Arg Lys Val Glu
            260   265   270

Val Tyr Ala Asp Ala Asp Glu Ile Leu Gln Glu Glu Ile Lys Glu Tyr
        275   280   285

Lys Ala Arg Leu Thr Cys Pro Cys Cys Asn Thr Arg Lys Lys Asp Ala
        290   295   300

Val Leu Thr Lys Cys Phe His Val Phe Cys Phe Glu Cys Val Arg Gly
305   310   315   320

Arg Tyr Glu Ala Arg Gln Arg Lys Cys Pro Lys Cys Asn Ala Ala Phe
            325   330   335

Gly Ala His Asp Phe His Arg Ile Tyr Ile Ser
        340   345

<210> 4840

<211> 997

<212> PRT

<213> Homo sapiens

<400> 4840

Met Glu Ala Ser Trp Arg Gln Val Ala Gly Gly Arg Gly Arg Ser Arg
  1   5   10   15

Gly Arg Ala Thr Ala Ala Pro Ser Gly Asn Gly Val His Leu Arg Gly
            20   25   30

Ala Gly Gly Gly Arg Glu Lys Gly Ser Val Gly Ala Val Pro Ser Gly
        35   40   45

Thr Ser Pro Gly Gly Val Ala Thr Thr Ala Ala Ala Gly Ser Arg His
        50   55   60

Ser Pro Ala Gly Ser Gln Ala Leu Gln Thr Thr Ala Ala Ser Glu Leu
65   70   75   80

Met Ser Gln Lys Lys Phe Glu Glu Ile Lys Lys Ala Asn Gln Ala Ala
                85   90   95

Ala Arg Lys Leu Val Glu Glu Gln Phe Ser Ser Ser Ser Glu Glu Gly
            100   105   110

Asp Glu Asp Phe Glu Gly Lys Gln Gly Lys Ile Leu Ala Asn Thr Phe
            115   120   125

Ile Thr Tyr Thr Thr Gln Thr Asp Gly Asp Thr Arg Glu Leu Glu Arg
        130   135   140

Thr Lys Gln Tyr Val Asn Glu Ala Phe Gln Ala Gly Ala Met Thr Cys
145   150   155   160

Leu Ile Cys Ile Ala Ser Val Lys Arg Asn Gln Ala Val Trp Ser Cys
                165   170   175

Ser Gly Cys Phe Cys Ile Phe His Met Pro Cys Ile Gln Lys Trp Ala
            180   185   190

Lys Asp Ser Gln Phe Leu Val Ser Ser Val Thr Asp Asp Asp Phe Gly
            195   200   205

Lys Lys Asp Cys Pro Trp Pro Cys Pro Lys Cys Arg Phe Glu Tyr Lys
        210   215   220

Arg Ser Glu Thr Pro Ser Arg Tyr Tyr Cys Tyr Cys Gly Lys Val Glu
225   230   235   240

Asp Pro Pro Leu Asp Pro Trp Leu Val Pro His Ser Cys Gly Gln Val
                245   250   255

Cys Glu Arg Glu Phe Lys Pro Pro Cys Gly His Lys Cys Leu Leu Leu
            260   265   270

Cys His Pro Gly Pro Cys Pro Pro Cys Pro Lys Met Val Thr Thr Thr
            275   280   285

Cys Tyr Cys Lys Lys Ala Lys Pro Ile Pro Arg Arg Cys Ser Ala Lys
        290   295   300

Glu Trp Ser Cys Gln Leu Pro Cys Gly Gln Lys Leu Leu Cys Gly Gln
305   310   315   320

His Lys Cys Glu Asn Pro Cys His Ala Gly Ser Cys Gln Pro Cys Pro
            325   330   335

Arg Val Ser Arg Gln Lys Cys Val Cys Gly Lys Lys Val Ala Glu Arg
            340.   345   350

Ser Cys Ala Ser Pro Leu Trp His Cys Asp Gln Val Cys Gly Lys Thr
            355   360   365

Leu Pro Cys Gly Asn His Thr Cys Glu Gln Val Cys His Val Gly Ala
   370   375   380

Cys Gly Glu Cys Pro Arg Ser Gly Lys Arg Phe Cys Pro Cys Gln Lys
385   390   395   400

Ser Lys Phe Ser Leu Pro Cys Thr Glu Asp Val Pro Thr Cys Gly Asp
          405   410   415

Ser Cys Asp Lys Val Leu Glu Cys Gly Ile His Arg Cys Ser Gln Arg
          420   425   430

Cys His Arg Gly Pro Cys Glu Thr Cys Arg Gln Glu Val Glu Lys His
          435   440   445

Cys Arg Cys Gly Lys His Thr Lys Arg Met Pro Cys His Lys Pro Tyr
   450   455   460

Leu Cys Glu Thr Lys Cys Val Lys Met Arg Asp Cys Gln Lys His Gln
465   470   475   480

Cys Arg Arg Lys Cys Cys Pro Gly Asn Cys Pro Pro Cys Asp Gln Asn
          485   490   495

Cys Gly Arg Thr Leu Gly Cys Arg Asn His Lys Cys Pro Ser Val Cys
          500   505   510

His Arg Gly Ser Cys Tyr Pro Cys Pro Glu Thr Val Asp Val Lys Cys
          515   520   525

Asn Cys Gly Asn Thr Lys Val Thr Val Pro Cys Gly Arg Glu Arg Thr
          530   535   540

Thr Arg Pro Pro Lys Cys Lys Glu Gln Cys Ser Arg Pro Pro Thr Cys
545   550   555   560

His His Thr Ser Gln Glu Lys His Arg Cys His Phe Gly Ser Cys Pro
          565   570   575

Pro Cys His Gln Pro Cys Gln Lys Val Leu Glu Lys Cys Gly His Leu
          580   585   590

Cys Pro Ala Pro Cys His Asp Gln Ala Leu Ile Lys Gln Thr Gly Arg
          595   600   605

His Gln Pro Thr Gly Pro Trp Glu Gln Pro Ser Glu Pro Ala Phe Ile
          610   615   620

Gln Thr Ala Leu Pro Cys Pro Pro Cys Gln Val Pro Ile Pro Met Glu
625   630   635   640

Cys Leu Gly Lys His Glu Val Ser Pro Leu Pro Cys His Ala Val Gly
          645   650   655

Pro Tyr Ser Cys Lys Arg Val Cys Gly Arg Ile Leu Asp Cys Gln Asn
     660   665   670

His Thr Cys Met Lys Glu Cys His Lys Val Thr Lys Thr Asp Gly Cys
     675   680   685

Thr Gly Lys Asn Lys Ala Gly Pro Glu Cys Leu His Cys Glu Glu Gly
     690   695   700

Cys Ser Lys Ser Arg Pro Leu Gly Cys Leu His Pro Cys Ile Leu Arg
705   710   715   720

Cys His Pro Gly Glu Cys Pro Pro Cys Val Gln Met Leu Arg Ile Lys
     725   730   735

Cys His Cys Lys Ile Thr Ser Leu Tyr Val Glu Cys Arg Lys Ile Thr
     740   745   750

Thr Ala Asp Val Asn Glu Lys Asn Leu Leu Ser Cys Cys Lys Asn Gln
     755   760   765

Cys Pro Lys Glu Leu Pro Cys Gly His Arg Cys Lys Glu Met Cys His
     770   775   780

Pro Gly Glu Cys Pro Phe Asn Cys Asn Gln Lys Val Lys Leu Arg Cys
785   790   795   800

Pro Cys Lys Arg Ile Lys Lys Glu Leu Gln Cys Asn Lys Val Arg Glu
     805   810   815

Asn Gln Val Ser Ile Glu Cys Asp Thr Thr Cys Lys Glu Met Lys Arg
     820   825   830

Lys Ala Ser Glu Ile Lys Glu Ala Glu Ala Lys Ala Ala Leu Glu Glu
     835   840   845

Glu Lys Arg Arg Gln Gln Ala Glu Leu Glu Ala Phe Glu Asn Arg Leu
     850   855   860

Lys Thr Asn His Ile Gly His Thr Gly Tyr Leu Asn Thr Val Thr Val
865   870   875   880

Ser Pro Asp Gly Ser Leu Cys Ala Ser Gly Gly Lys Asp Gly Gln Ala
     885   890   895

Met Leu Trp Asp Leu Asn Glu Gly Lys His Leu Tyr Thr Leu Asp Gly
     900   905   910

Gly Asp Ile Ile Asn Ala Leu Cys Phe Ser Pro Asn Arg Tyr Trp Leu
     915   920   925

Cys Ala Ala Thr Gly Pro Ser Ile Lys Ile Trp Asp Leu Glu Gly Lys
     930   935   940

Ile Ile Val Asp Glu Leu Lys Gln Glu Val Ile Ser Thr Ser Ser Lys
·945   950   955   960

Ala Glu Pro Pro Gln Cys Thr Ser Leu Ala Trp Ser Ala Asp Gly Gln
                965   970   975

Thr Leu Phe Ala Gly Tyr Thr Asp Asn Leu Val Arg Val Trp Gln Val
                980   985   990

Thr Ile Gly Thr Arg
        995

<210> 4841

<211> 709

<212> PRT

<213> Homo sapiens

<400> 4841

Met Lys Arg Cys Arg Ser Asp Glu Leu Gln Gln Gln Gln Gly Glu Glu
  1   5   10   15

Asp Gly Ala Gly Leu Glu Asp Ala Ala Ser His Leu Pro Gly Ala Asp
                20   25   30

Leu Arg Pro Gly Glu Thr Thr Gly Ala Asn Ser Ala Gly Gly Pro Thr
        35   40   45

Ser Asp Ala Gly Ala Ala Ala Ala Pro Asn Pro Gly Pro Arg Ser Lys
        50   55   60

Pro Pro Asp Leu Lys Lys Ile Gln Gln Leu Ser Glu Gly Ser Met Phe
65   70   75   80

Gly His Gly Leu Lys His Leu Phe His Ser Arg Arg Arg Ser Arg Glu
                85   90   95

Arg Glu His Gln Thr Ser Gln Asp Ser Gln Gln His Gln Gln Gln Gln
                100   105   110

Gly Met Ser Asp His Asp Ser Pro Asp Glu Lys Glu Arg Ser Pro Glu
        115   120   125

Met His Arg Val Ser Tyr Ala Met Ser Leu His Asp Leu Pro Ala Arg
        130   135   140

Pro Thr Ala Phe Asn Arg Val Leu Gln Gln Ile Arg Ser Arg Pro Ser
145   150   155   160

Ile Lys Arg Gly Ala Ser Leu His Ser Ser Ser Gly Gly Gly Ser Ser
                165   170   175

Gly Ser Ser Ser Arg Arg Thr Lys Ser Ser Ser Leu Glu Pro Gln Arg
                180   185   190

Gly Ser Pro His Leu Leu Arg Lys Ala Pro Gln Asp Ser Ser Leu Ala
            195   200   205

Ala Ile Leu His Gln His Gln Cys Arg Pro Arg Ser Ser Ser Thr Thr
        210   215   220

Asp Thr Ala Leu Leu Leu Ala Asp Gly Ser Asn Val Tyr Leu Leu Ala
225   230   235   240

Glu Glu Ala Glu Gly Ile Gly Asp Lys Val Asp Lys Gly Asp Leu Val
                245   250   255

Ala Leu Ser Leu Pro Ala Gly His Gly Asp Thr Asp Gly Pro Ile Ser
                260   265   270

Leu Asp Val Pro Asp Gly Ala Pro Asp Pro Gln Arg Thr Lys Ala Ala
            275   280   285

Ile Asp His Leu His Gln Lys Ile Leu Lys Ile Thr Glu Gln Ile Lys
        290   295   300

Ile Glu Gln Glu Ala Arg Asp Asp Asn Val Ala Glu Tyr Leu Lys Leu

305   310   315   320
Ala Asn Asn Ala Asp Lys Gln Gln Val Ser Arg Ile Lys Gln Val Phe
                325   330   335

Glu Lys Lys Asn Gln Lys Ser Ala Gln Thr Ile Ala Gln Leu His Lys
            340   345   350

Lys Leu Glu His Tyr Arg Arg Arg Leu Lys Glu Ile Glu Gln Asn Gly
            355   360   365

Pro Ser Arg Gln Pro Lys Asp Val Leu Arg Asp Met Gln Gln Gly Leu
        370   375   380

Lys Asp Val Gly Ala Asn Val Arg Ala Gly Ile Ser Gly Phe Gly Gly
385   390   395   400

Gly Val Val Glu Gly Val Lys Gly Ser Leu Ser Gly Leu Ser Gln Ala
                405   410   415

Thr His Thr Ala Val Val Ser Lys Pro Arg Glu Phe Ala Ser Leu Ile
            420   425   430

Arg Asn Lys Phe Gly Ser Ala Asp Asn Ile Ala His Leu Lys Asp Pro

```
                435                   440                   445
Leu Glu Asp Gly Pro Pro Glu Glu Ala Ala Arg Ala Leu Ser Gly Ser
        450                   455                   460
Ala Thr Leu Val Ser Ser Pro Lys Tyr Gly Ser Asp Asp Glu Cys Ser
465                   470                   475                   480
Ser Ala Ser Ala Ser Ser Ala Gly Ala Gly Ser Asn Ser Gly Ala Gly
                485                   490                   495
Pro Gly Gly Ala Leu Gly Ser Pro Lys Ser Asn Ala Leu Tyr Gly Ala
                500                   505                   510
Pro Gly Asn Leu Asp Ala Leu Leu Glu Glu Leu Arg Glu Ile Lys Glu
        515                   520                   525
Gly Gln Ser His Leu Glu Asp Ser Met Glu Asp Leu Lys Thr Gln Leu
        530                   535                   540
Gln Arg Asp Tyr Thr Tyr Met Thr Gln Cys Leu Gln Glu Glu Arg Tyr
545                   550                   555                   560
Arg Tyr Glu Arg Leu Glu Glu Gln Leu Asn Asp Leu Thr Glu Leu His
                565                   570                   575
Gln Asn Glu Met Thr Asn Leu Lys Gln Glu Leu Ala Ser Met Glu Glu
                580                   585                   590
Lys Val Ala Tyr Gln Ser Tyr Glu Arg Ala Arg Asp Ile Gln Glu Ala
                595                   600                   605
Val Glu Ser Cys Leu Thr Arg Val Thr Lys Leu Glu Leu Gln Gln Gln
        610                   615                   620
Gln Gln Gln Val Val Gln Leu Glu Gly Val Glu Asn Ala Asn Ala Arg
625                   630                   635                   640
Ala Leu Leu Gly Lys Phe Ile Asn Val Ile Leu Ala Leu Met Ala Val
                645                   650                   655
Leu Leu Val Phe Val Ser Thr Ile Ala Asn Phe Ile Thr Pro Leu Met
                660                   665        ·            670
Lys Thr Arg Leu Arg Ile Thr Ser Thr Thr Leu Leu Val Leu Val Leu
                675                   680                   685
Phe Leu Leu Trp Lys His Trp Asp Ser Leu Thr Tyr Leu Leu Glu His
        690                   695                   700
Val Leu Leu Pro Ser
705
```

<210> 4842

<211> 335

<212> PRT

<213> Homo sapiens

<400> 4842

Met Gln Arg His Val Met Val Ala Asn Pro Ser Val Leu Cys Ser His
1   5   10   15

Phe Asn Gln Asp Leu Trp Pro Glu Gln Ser Ile Lys Asp Ser Phe Gln
            20   25   30

Lys Leu Ile Leu Arg Arg His Lys Lys Cys Gly His Asp Asn Leu Gln
            35   40   45

Leu Lys Lys Gly Cys Glu Ser Val Asp Lys Cys Lys Val His Lys Arg
        50   55   60

Gly Tyr Asn Gly Leu Asn Gln Cys Leu Thr Thr Thr Gln Ser Lys Met
65   70   75   80

Phe Gln Cys Asp Lys His Gly Lys Val Phe His Gln Phe Ser Asn Thr
                85   90   95

Asn Arg His Lys Ile Arg His Thr Gly Lys Asn Pro Cys Lys Phe Thr
                100   105   110

Glu Cys Gly Lys Ala Phe Asn Arg Ser Ser Thr Phe Thr Thr His Lys
                115   120   125

Lys Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Ile Glu Cys Gly Lys
        130   135   140

Ala Phe Asn Arg Ser Ser His Leu Thr Thr His Lys Ile Ile His Thr
145   150   155   160

Gly Glu Lys Arg Tyr Lys Cys Glu Asp Cys Gly Lys Ala Phe Asn Arg
                165   170   175

Ser Ser Asn Leu Thr Thr His Lys Lys Ile His Thr Gly Glu Lys Pro
                180   185   190

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Lys Arg Ser Ser Ile Leu
                195   200   205

Thr Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu
        210   215   220

Glu Cys Gly Lys Val Phe Lys Tyr Leu Ser Ser Leu Ser Thr His Lys

```
        225                   230                   235                   240
Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys
                245                   250                   255
Ala Phe Asn Trp Ser Ser His Leu Thr Thr His Lys Arg Ile His Thr
                260                   265                   270
Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Gly Phe Lys Tyr
                275                   280                   285
Ser Ser Thr Leu Thr Lys His Lys Ile Ile His Thr Gly Glu Lys Pro
        290                   295                   300
Tyr Lys Cys Glu Glu Cys Arg Ser Leu Arg Ser Gln Cys Asp Gln Leu
305                   310                   315                   320
Glu Glu Arg Val Ser Val Met Glu Asp Glu Met Asn Gly Met Lys
                325                   330                   335
```

<210> 4843

<211> 505

<212> PRT

<213> Homo sapiens

<400> 4843

```
Met Lys Ala Gln Arg Glu Arg Leu Gln Ile Pro Gly Leu Thr Leu Asp
  1                   5                   10                  15
Leu Thr Pro Arg Ser Leu Ser Pro Thr Pro Ser Ser Pro Gly Ser Pro
                20                  25                  30
Cys Ser Pro Leu Leu Ala Phe His Phe Trp Ser Cys Arg Thr Ser Asn
                35                  40                  45
Arg Lys Ser Leu Ile Gly Asn Gly Gln Ser Pro Ala Leu Pro Arg Pro
        50                  55                  60
His Ser Pro Leu Ser Ala His Ala Gly Asn Ser Pro Gln Asp Ser Pro
65                  70                  75                  80
Arg Asn Phe Ser Pro Ser Ala Ser Ala His Phe Ser Phe Ala Arg Arg
                85                  90                  95
Asn Asp Arg Thr Asp Gly Arg Arg Trp Ser Leu Ala Ser Leu Pro Ser
                100                 105                 110
Ser Gly Tyr Gly Thr Asn Thr Pro Ser Ser Thr Val Ser Ser Ser Cys
```

```
              115                    120                    125
Ser Ser Gln Glu Lys Leu His Gln Leu Pro Tyr Gln Pro Thr Pro Asp
    130                    135                    140
Glu Leu His Phe Leu Ser Lys His Phe Cys Thr Thr Glu Ser Ile Ala
145                    150                    155                    160
Thr Glu Asn Arg Cys Arg Asn Thr Pro Met His Pro Arg Ser Arg Ser
                  165                    170                    175
Leu Ser Pro Gly Arg Ser Pro Ala Cys Cys Asp His Glu Ile Ile Met
                  180                    185                    190
Met Asn His Val Tyr Lys Glu Arg Phe Pro Lys Ala Thr Ala Gln Met
                  195                    200                    205
Glu Glu Arg Leu Lys Glu Ile Ile Thr Ser Tyr Ser Pro Asp Asn Val
    210                    215                    220
Leu Pro Leu Ala Asp Gly Val Leu Ser Phe Thr His His Gln Ile Ile
225                    230                    235                    240
Glu Leu Ala Arg Asp Cys Leu Asp Lys Ser His Gln Gly Leu Ile Thr
                  245                    250                    255
Ser Arg Tyr Phe Leu Glu Leu Gln His Lys Leu Asp Lys Leu Leu Gln
                  260                    265                    270
Glu Ala His Asp Arg Ser Glu Ser Gly Glu Leu Ala Phe Ile Lys Gln
                  275                    280                    285
Leu Val Arg Lys Ile Leu Ile Val Ile Ala Arg Pro Ala Arg Leu Leu
    290                    295                    300
Glu Cys Leu Glu Phe Asp Pro Glu Glu Phe Tyr Tyr Leu Leu Glu Ala
305                    310                    315                    320
Ala Glu Gly His Ala Lys Glu Gly Gln Gly Ile Lys Thr Asp Ile Pro
                  325                    330                    335
Arg Tyr Ile Ile Ser Gln Leu Gly Leu Asn Lys Asp Pro Leu Glu Glu
                  340                    345                    350
Met Ala His Leu Gly Asn Tyr Asp Ser Gly Thr Ala Glu Thr Pro Glu
                  355                    360                    365
Thr Asp Glu Ser Val Ser Ser Ser Asn Ala Ser Leu Lys Leu Arg Arg
    370                    375                    380
Lys Pro Arg Glu Ser Asp Phe Glu Thr Ile Lys Leu Ile Ser Asn Gly
385                    390                    395                    400
Ala Tyr Gly Ala Val Tyr Phe Val Arg His Lys Glu Ser Arg Gln Arg
```

```
                405                  410                 415
Phe Ala Met Lys Lys Ile Asn Lys Gln Asn Leu Ile Leu Arg Asn Gln
            420                  425                 430
Ile Gln Gln Ala Phe Val Glu Arg Asp Ile Leu Thr Phe Ala Glu Asn
            435                  440                 445
Pro Phe Val Val Ser Met Tyr Cys Ser Phe Glu Thr Arg Arg His Leu
        450                  455                  460
Cys Met Val Met Glu Tyr Val Glu Gly Gly Asp Cys Ala Thr Leu Met
465                  470                  475                  480
Lys Asn Thr Gly Pro Leu Pro Val Asp Met Ala Arg Met Tyr Phe Ala
                485                  490                 495
Glu Thr Val Leu Ala Leu Glu Phe Thr
            500                  505
```

<210> 4844

<211> 408

<212> PRT

<213> Homo sapiens

<400> 4844

```
Met Arg Glu Lys Ser Phe Gln Cys Asn Glu Ser Gly Lys Ala Phe Asn
1               5                  10                  15
Tyr Ser Ser Leu Leu Arg Lys His Gln Ile Ile His Leu Gly Glu Lys
            20                  25                  30
Gln Tyr Lys Cys Asp Val Cys Gly Lys Val Phe Asn Arg Lys Arg Asn
            35                  40                  45
Leu Val Cys His Arg Arg Cys His Thr Gly Glu Lys Pro Tyr Arg Cys
        50                  55                  60
Asn Glu Cys Gly Lys Thr Phe Ser Gln Thr Tyr Ser Leu Thr Cys His
65                  70                  75                  80
Arg Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Asp
                85                  90                  95
Lys Ala Phe Ser Phe Lys Ser Asn Leu Lys Arg His Arg Arg Ile His
            100                 105                 110
Ala Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser
```

```
            115                    120                    125
Gln Thr Ser Ser Leu Thr Cys His Arg Arg Leu His Thr Gly Glu Lys
        130                    135                    140
Pro Phe Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Lys Ser Ser
145                    150                    155                    160
Leu Thr Cys His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys
                    165                    170                    175
Asn Glu Cys Gly Lys Thr Phe Ser Gln Glu Leu Thr Leu Lys Cys His
                    180                    185                    190
Arg Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly
                    195                    200                    205
Lys Val Phe Asn Lys Lys Ala Asn Leu Ala Arg His His Arg Leu His
        210                    215                    220
Ser Gly Glu Lys Pro Tyr Lys Cys Thr Glu Cys Val Lys Thr Phe Ser
225                    230                    235                    240
Arg Asn Ser Ala Leu Val Ile His Lys Ala Ile His Ile Gly Glu Lys
                    245                    250                    255
Arg Tyr Lys Cys Asn Glu Cys Gly Lys Thr Phe Ser Arg Ile Ser Ala
                    260                    265                    270
Leu Val Ile His Thr Ala Ile His Thr Gly Glu Lys Pro Tyr Lys Cys

            275                    280                    285
Asn Glu Cys Gly Lys Gly Phe Asn Arg Lys Thr His Leu Ala Cys His
        290                    295                    300
His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly
305                    310                    315                    320
Lys Val Phe Asn Arg Lys Thr His Leu Ala His His His Arg Leu His
                    325                    330                    335
Thr Gly Asp Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Asn
                    340                    345                    350
Gln Lys Ala His Leu Ala Arg His His Arg Leu His Thr Gly Glu Lys
        355                    360                    365
Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Asn Gln Lys Ala Asn
        370                    375                    380
Leu Ala Arg His His Arg Leu His Thr Gly Glu Lys Pro Tyr Lys Phe
385                    390                    395                    400
```

Asn Glu Cys Gly Lys Ala Phe Asn
                    405

<210> 4845

<211> 596

<212> PRT

<213> Homo sapiens

<400> 4845

Met Leu Pro Ser Gln Ala Gln Gly Leu Leu Trp Trp Val Phe Pro Leu
  1   5   10   15

Phe Pro Ala Ser Ser Leu Ser Tyr Pro Pro Val Ser Tyr Arg Ala Asp
                20   25   30

Gly Leu Ala Arg Asn Thr Phe Leu Lys Ala Cys Ser Glu Ser Ser Ser
            35   40   45

Ser Ser Asn Ile Ser Thr Met Leu Val Thr His Asp Tyr Thr Ala Val
        50   55   60

Lys Glu Asp Glu Ile Asn Val Tyr Gln Gly Glu Val Val Gln Ile Leu
 65   70   75   80

Ala Ser Asn Gln Gln Asn Met Phe Leu Val Phe Arg Ala Ala Thr Asp
                85   90   95

Gln Cys Pro Ala Ala Glu Gly Trp Ile Pro Gly Phe Val Leu Gly His
                100   105   110

Thr Ser Ala Val Ile Val Glu Asn Pro Asp Gly Thr Leu Lys Lys Ser
            115   120   125

Thr Ser Trp His Thr Ala Leu Arg Leu Arg Lys Lys Ser Glu Lys Lys
        130   135   140

Asp Lys Asp Gly Lys Arg Glu Gly Lys Leu Glu Asn Gly Tyr Arg Lys
145   150   155   160

Ser Arg Glu Gly Leu Ser Asn Lys Val Ser Val Lys Leu Leu Asn Pro
                165   170   -   175

Asn Tyr Ile Tyr Asp Val Pro Pro Glu Phe Val Ile Pro Leu Ser Glu
                180   185   190

Val Thr Cys Glu Thr Gly Glu Thr Val Val Leu Arg Cys Arg Val Cys
                195   200   205

Gly Arg Pro Lys Ala Ser Ile Thr Trp Lys Gly Pro Glu His Asn Thr
    210   215   220

Leu Asn Asn Asp Gly His Tyr Ser Ile Ser Tyr Ser Asp Leu Gly Glu
225   230   235   240

Ala Thr Leu Lys Ile Val Gly Val Thr Thr Glu Asp Asp Gly Ile Tyr
             245   250   255

Thr Cys Ile Ala Val Asn Asp Met Gly Ser Ala Ser Ser Ser Ala Ser
          260   265   270

Leu Arg Val Leu Gly Pro Gly Met Asp Gly Ile Met Val Thr Trp Lys
          275   280   285

Asp Asn Phe Asp Ser Phe Tyr Ser Glu Val Ala Glu Leu Gly Arg Gly
          290   295   300

Arg Phe Ser Val Val Lys Lys Cys Asp Gln Lys Gly Thr Lys Arg Ala
305   310   315   320

Val Ala Thr Lys Phe Val Asn Lys Lys Leu Met Lys Arg Asp Gln Val
          325   330   335

Thr His Glu Leu Gly Ile Leu Gln Ser Leu Gln His Pro Leu Leu Val
          340   345   350

Gly Leu Leu Asp Thr Phe Glu Thr Pro Thr Ser Tyr Ile Leu Val Leu
          355   360   365

Glu Met Ala Asp Gln Gly Arg Leu Leu Asp Cys Val Val Arg Trp Gly
          370   375   380

Ser Leu Thr Glu Gly Lys Ile Arg Ala His Leu Gly Glu Val Leu Glu
385   390   395   400

Ala Val Arg Tyr Leu His Asn Cys Arg Ile Ala His Leu Asp Leu Lys
          405   410   415

Pro Glu Asn Ile Leu Val Asp Glu Ser Leu Ala Lys Pro Thr Ile Lys
          420   425   430

Leu Ala Asp Phe Gly Asp Ala Val Gln Leu Asn Thr Thr Tyr Tyr Ile
          435   440   445

His Gln Leu Leu Gly Asn Pro Glu Phe Ala Ala Pro Glu Ile Ile Leu
          450   455   460

Gly Asn Pro Val Ser Leu Thr Ser Asp Thr Trp Ser Val Gly Val Leu
465   470   475   480

Thr Tyr Val Leu Leu Ser Gly Val Ser Pro Phe Leu Asp Asp Ser Val
          485   490   495

Glu Glu Thr Cys Leu Asn Ile Cys Arg Leu Asp Phe Ser Phe Pro Asp
          500   505   510

Asp Tyr Phe Lys Gly Val Ser Gln Lys Ala Lys Glu Phe Val Cys Phe
          515   520   525

Leu Leu Gln Glu Asp Pro Ala Lys Arg Pro Ser Ala Ala Leu Ala Leu
        530   535   540

Gln Glu Gln Trp Leu Gln Ala Gly Asn Gly Arg Ser Thr Gly Val Leu
545   550   555   560

Asp Thr Ser Arg Leu Thr Ser Phe Ile Glu Arg Arg Lys His Gln Asn
              565   570   575

Asp Val Arg Pro Ile Arg Ser Ile Lys Asn Phe Leu Gln Ser Arg Leu
        580   585   590

Leu Pro Arg Val
        595

<210> 4846

<211> 569

<212> PRT

<213> Homo sapiens

<400> 4846

Met Pro Ser Ser Leu Phe Ala Asp Leu Glu Arg Asn Gly Ser Gly Gly
1   5   10   15

Gly Gly Gly Gly Ser Ser Gly Gly Gly Glu Thr Leu Asp Asp Gln Arg
          20   25   30

Ala Leu Gln Leu Ala Leu Asp Gln Leu Ser Leu Leu Gly Leu Asp Ser
        35   40   45

Asp Glu Gly Ala Ser Leu Tyr Asp Ser Glu Pro Arg Lys Lys Ser Val
        50   55   60

Asn Met Thr Glu Cys Val Pro Val Pro Ser Ser Glu His Val Ala Glu
65   70   75   80

Ile Val Gly Arg Gln Gly Cys Lys Ile Lys Ala Leu Arg Ala Lys Thr
              85   90   95

Asn Thr Tyr Ile Lys Thr Pro Val Arg Gly Glu Glu Pro Val Phe Val
          100   105   110

Val Thr Gly Arg Lys Glu Asp Val Ala Met Ala Arg Arg Glu Ile Ile
          115   120   125

Ser Ala Ala Glu His Phe Ser Met Ile Arg Ala Ser Arg Asn Lys Asn
          130   135   140

Thr Ala Leu Asn Gly Ala Val Pro Gly Pro Pro Asn Leu Pro Gly Gln
145   150   155   160

Thr Thr Ile Gln Val Arg Val Pro Tyr Arg Val Val Gly Leu Val Val
          165   170   175

Gly Pro Lys Gly Ala Thr Ile Lys Arg Ile Gln Gln Gln Thr His Thr
          180   185   190

Tyr Ile Val Thr Pro Ser Arg Asp Lys Glu Pro Val Phe Glu Val Thr
          195   200   205

Gly Met Pro Glu Asn Val Asp Arg Ala Arg Glu Glu Ile Glu Ala His
          210   215   220

Ile Ala Leu Arg Thr Gly Gly Ile Ile Glu Leu Thr Asp Glu Asn Asp
225   230   235   240

Phe His Ala Asn Gly Thr Asp Val Gly Phe Asp Leu His His Gly Ser
               245   250   255

Gly Gly Ser Gly Pro Gly Ser Leu Trp Ser Lys Pro Thr Pro Ser Ile
          260   265   270

Thr Pro Thr Pro Gly Arg Lys Pro Phe Ser Ser Tyr Arg Asn Asp Ser
          275   280   285

Ser Ser Ser Leu Gly Ser Ala Ser Thr Asp Ser Tyr Phe Gly Gly Gly
          290   295   300

Thr Ser Ser Ser Ala Ala Ala Thr Gln Arg Leu Ala Asp Tyr Ser Pro
305   310   315   320

Pro Ser Pro Ala Leu Ser Phe Ala His Asn Gly Asn Asn Asn Asn Asn
               325   330   335

Gly Asn Gly Tyr Thr Tyr Thr Ala Gly Gly Glu Ala Ser Val Pro Ser
          340   345   350

Pro Asp Gly Cys Pro Glu Leu Gln Pro Thr Phe Asp Pro Ala Pro Ala
          355   360   365

Pro Pro Pro Gly Ala Pro Leu Ile Trp Ala Gln Phe Glu Arg Ser Pro
          370   375   380

Gly Gly Gly Pro Ala Ala Pro Val Ser Ser Ser Cys Ser Ser Ser Ala
385   390   395   400

Ser Ser Ser Ala Ser Ser Ser Ser Val Val Phe Pro Gly Gly Gly Ala
                405   410   415

Ser Ala Pro Ser Asn Ala Asn Leu Gly Leu Leu Val His Arg Arg Leu
            420   425   430

His Pro Gly Thr Ser Cys Pro Arg Leu Ser Pro Pro Leu His Met Ala
            435   440   445

Pro Gly Ala Gly Glu His His Leu Ala Arg Arg Val Arg Ser Asp Pro
        450   455   460

Gly Gly Gly Gly Leu Ala Tyr Ala Ala Tyr Ala Asn Gly Leu Gly Ala
465   470   475   480

Gln Leu Pro Gly Leu Gln Pro Ser Asp Thr Ser Gly Ser Ser Ser Ser
            485   490   495

Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Gly Leu Arg Arg
            500   505   510

Lys Gly Ser Arg Asp Cys Ser Val Cys Phe Glu Ser Glu Val Ile Ala
            515   520   525

Ala Leu Val Pro Cys Gly His Asn Leu Phe Cys Met Glu Cys Ala Asn
            530   535   540

Arg Ile Cys Glu Lys Ser Glu Pro Glu Cys Pro Val Cys His Thr Ala
545   550   555   560

Val Thr Gln Ala Ile Arg Ile Phe Ser
                565

<210> 4847

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4847

Met Ala Leu Leu Ile Thr Pro Ala Gly Val Ala Thr Val Asn Arg His
1   5   10   15

Ser Thr Ile Pro Ser Asp Thr His Thr Ser Arg Glu Lys Pro Arg Phe
            20   25   30

His Lys Pro Cys Arg Asn Asp Leu Glu Ser Leu Leu Ser Glu Gly Arg
            35   40   45

```
Leu Asp Thr Ser Val Gln Thr Pro Cys Pro Gln His Pro His Thr Gln
    50              55              60
Leu Ser Cys Glu Pro Gln Pro Leu Glu His Ser Ser Cys Leu Ser Thr
65              70              75              80
Cys Leu Ala Gly Cys Phe Leu Pro Val Pro Ser Ser Pro His Thr His
            85              90              95
Pro Leu Leu Pro Gly Ser Arg Trp Leu Pro Pro Pro Leu Ala Leu Leu
            100             105             110
Met Gly Thr Leu Ser Pro Gly Leu Ala Val Lys Pro Ser Trp Val Pro
            115             120             125
Arg Phe Pro Leu Leu Ala Arg Gln Ser Pro Ala Thr Ser Val Gly Met
    130             135             140
Pro Leu Ser Ala Ala Thr Gln Pro Gly Ser Val Gly Arg Leu His Phe
145             150             155             160
Pro Lys Leu Arg Ser Ser Ser Pro Phe Ser Gly His Ser Asp Glu Asn
            165             170             175
Lys Ala Thr Gly Gln Gly Arg Glu Asn Arg Asp Gln Pro Gln Arg Pro
            180             185             190
Ser His Leu Cys Glu Cys Pro Glu Ala Ala Lys Gln Ser Ala Thr Asn
            195             200             205
Gly Val Ala Glu Thr Asn Arg Ser Val Phe Pro Leu Gly Ser Glu Ala
    210             215             220
Arg Ser Leu Ser Leu Arg Arg Gln Glu Ser Gln Pro His Ser Gly Ser
225             230             235             240
Ser Arg Arg Glu Ser Val Ser Cys Ser Pro Ser Phe Trp Cys Cys Trp
            245             250             255
Gln Pro Leu Ala Phe Leu Thr Cys Gly Cys Ala Ala Pro Ile Ser Val
            260             265             270
Pro Gly Val Thr Arg Pro Ser Pro Arg Pro Cys Cys Val Ser Pro Pro
            275             280             285
Leu Val Arg Leu Gln Ser Leu Gly Leu Gly Pro Thr Gln Ile
    290             295             300
```

<210> 4848
<211> 449

<212> PRT

<213> Homo sapiens

<400> 4848

Met Pro Gly Met Met Glu Lys Gly Pro Glu Leu Leu Gly Lys Asn Arg
1   5   10   15

Ser Ala Asn Gly Ser Ala Lys Ser Pro Ala Gly Gly Gly Gly Ser Gly
                20   25   30

Ala Ser Ser Thr Asn Gly Gly Leu His Tyr Ser Glu Pro Glu Ser Gly
            35   40   45

Cys Ser Ser Asp Asp Glu His Asp Val Gly Met Arg Val Gly Ala Glu
        50   55   60

Tyr Gln Ala Arg Ile Pro Glu Phe Asp Pro Gly Ala Thr Lys Tyr Thr
65   70   75   80

Asp Lys Asp Asn Gly Gly Met Leu Val Trp Ser Pro Tyr His Ser Ile
                85   90   95

Pro Asp Ala Lys Leu Asp Glu Tyr Ile Ala Ile Ala Lys Glu Lys His
            100   105   110

Gly Tyr Asn Val Glu Gln Ala Leu Gly Met Leu Phe Trp His Lys His
        115   120   125

Asn Ile Glu Lys Ser Leu Ala Asp Leu Pro Asn Phe Thr Pro Phe Pro
        130   135   140

Asp Glu Trp Thr Val Glu Asp Lys Val Leu Phe Glu Gln Ala Phe Ser
145   150   155   160

Phe His Gly Lys Ser Phe His Arg Ile Gln Gln Met Leu Pro Asp Lys
                165   170   175

Thr Ile Ala Ser Leu Val Lys Tyr Tyr Tyr Ser Trp Lys Lys Thr Arg
            180   185   190

Ser Arg Thr Ser Leu Met Asp Arg Gln Ala Arg Lys Leu Ala Asn Arg
            195   200   205

His Asn Gln Gly Asp Ser Asp Asp Asp Val Glu Glu Thr His Pro Met
        210   215   220

Asp Gly Asn Asp Ser Asp Tyr Asp Pro Lys Lys Glu Ala Lys Lys Glu
225   230   235   240

Gly Asn Thr Glu Gln Pro Val Gln Thr Ser Lys Ile Gly Leu Gly Arg
                245   250   255

Arg Glu Tyr Gln Ser Leu Gln His Arg His His Ser Gln Arg Ser Lys
            260   265   270

Cys Arg Pro Pro Lys Gly Met Tyr Leu Thr Gln Glu Asp Val Val Ala
            275   280   285

Val Ser Cys Ser Pro Asn Ala Ala Asn Thr Ile Leu Arg Gln Leu Asp
        290   295   300

Met Glu Leu Ile Ser Leu Lys Arg Gln Val Gln Asn Ala Lys Gln Val
305   310   315   320

Asn Ser Ala Leu Lys Gln Lys Met Glu Gly Gly Ile Glu Glu Phe Lys
                325   330   335

Pro Pro Glu Ser Asn Gln Lys Ile Asn Ala Arg Trp Thr Thr Glu Glu
            340   345   350

Gln Leu Leu Ala Val Gln Gly Val Arg Lys Tyr Gly Lys Asp Phe Gln
            355   360   365

Ala Ile Ala Asp Val Ile Gly Asn Lys Thr Val Gly Gln Val Lys Asn
        370   375   380

Phe Phe Val Asn Tyr Arg Arg Arg Phe Asn Leu Glu Glu Val Leu Gln
385   390   395   400

Glu Trp Glu Ala Glu Gln Gly Thr Gln Ala Ser Asn Gly Asp Ala Ser
                405   410   415

Thr Leu Gly Glu Glu Thr Lys Ser Ala Ser Asn Val Pro Ser Gly Lys
            420   425   430

Ser Thr Asp Glu Glu Glu Glu Val Cys Leu Cys Met Glu Phe Glu Leu
            435   440   445

Ile

<210> 4849
<211> 244
<212> PRT
<213> Homo sapiens

<400> 4849
Met Thr Gly Ser Asn Ser His Ile Thr Ile Leu Thr Val Asn Ile Asn

```
 1                  5                    10                   15
Gly Leu Asn Ala Pro Ile Lys Gly His Arg Leu Ala Asn Trp Ile Lys
                20                   25                   30
Ser Gln Asp Pro Ser Val Cys Cys Ile Gln Glu Thr His Leu Met Arg
                35                   40                   45
Lys Phe Thr His Arg Phe Asn Ile Lys Gly Trp Arg Lys Ile Tyr Gln
             50                   55                   60
Glu Asn Gly Lys Gln Lys Lys Ala Gly Val Ala Ile Leu Val Ser Asp
65                   70                   75                   80
Lys Thr Asp Phe Lys Pro Thr Lys Ile Lys Gly Asp Lys Gly His Tyr
                85                   90                   95
Ile Met Val Lys Gly Ser Met Gln Gln Glu Glu Leu Thr Ile Leu Asn
               100                  105                  110
Ile Tyr Ala Pro Asn Thr Arg Ala Pro Arg Phe Ile Lys Gln Val Leu
              115                  120                  125
Arg Asp Leu Gln Arg Asp Leu Asp Ser His Thr Ile Ile Met Gly Asp
    130                  135                  140
Phe Asn Thr Glu Leu Ser Ile Leu Glu Arg Ser Thr Arg Gln Lys Val
145                  150                  155                  160
Asn Lys Asp Ile Gln Asp Leu Asn Ser Ala Leu Gln Gln Thr Asp Pro
               165                  170                  175
Ile Asp Ile His Arg Asn Leu His Leu Lys Ser Thr Glu Tyr Thr Leu
              180                  185                  190
Phe Ser Ala Pro His Ile Thr Tyr Ser Lys Phe Asp His Ile Ile Gly
              195                  200                  205
Ser Lys Ala Leu Leu Thr Lys Cys Lys Arg Thr Glu Ile Thr Thr Asn
    210                  215                  220
Cys Leu Leu Asp His Ser Ala Ile Lys Phe Glu Leu Arg Ile Lys Lys
225                  230                  235                  240
Leu Thr Gln Asn
```

<210> 4850

<211> 695

<212> PRT

11335

<213> Homo sapiens

<400> 4850

Met Val Tyr Pro Tyr Pro Gly Ala Arg Ala Glu Glu Lys Leu Gly Gly
1   5   10   15

Thr Arg Asp Pro Thr Tyr Gln Glu Arg Ala Ala Pro Gln Thr Gln Pro
                20   25   30

Leu Gly Lys Glu Thr Asp Ser Leu Ser Ala Gly Phe Val Val Val Met
            35   40   45

Gly Val Asp Leu Ser Arg Cys Gly Pro Asp His Thr Ala Ser Arg Cys
        50   55   60

Pro Trp Asp Pro Gly Leu Leu Leu Arg Phe Leu Ala Ala Met Ala Ala
65   70   75   80

Val Gly Ala Leu Glu Pro Leu Leu Pro Gly Pro Leu Leu Ala Val His
                85   90   95

Pro His Ala Gly Thr Ala Pro Pro Ala Asn Gln Leu Pro Trp Pro Val
                100   105   110

Leu Cys Ser Pro Val Ala Gly Val Ile Leu Leu Ala Leu Gly Ala Leu
            115   120   125

Leu Val Leu Gln Leu Ile Arg Arg Arg Arg Glu His Gly Ala Leu
        130   135   140

Trp Leu Pro Pro Gly Phe Thr Arg Arg Pro Arg Thr Gln Ser Ala Pro
145   150   155   160

His Arg Arg Arg Pro Pro Leu Gly Glu Asp Ser Ile Gly Leu Lys Ala
                165   170   175

Leu Lys Pro Lys Ala Glu Val Asp Glu Asp Gly Val Val Met Cys Ser
                180   185   190

Gly Pro Glu Glu Gly Glu Glu Ala Glu Glu Thr Gly Pro Pro Ser Thr
            195   200   205

Cys Gln Leu Trp Ser Leu Ser Gly Gly Cys Gly Ala Leu Pro Gln Ala
        210   215   220

Ala Met Leu Thr Pro Pro Gln Glu Ser Glu Met Glu Ala Pro Asp Leu
225   230   235   240

Asp Thr Arg Gly Pro Asp Gly Val Thr Pro Leu Met Ser Ala Val Cys
                245   250   255

Cys Gly Glu Val Gln Ser Gly Thr Phe Gln Gly Ala Trp Leu Gly Cys

```
                 260                    265                    270
Pro Glu Pro Trp Glu Pro Leu Leu Asp Gly Gly Ala Cys Pro Gln Ala
            275                    280                    285
His Thr Val Gly Thr Gly Glu Thr Pro Leu His Leu Ala Ala Arg Phe
            290                    295                    300
Ser Arg Pro Thr Ala Ala Arg Arg Leu Leu Glu Ala Gly Ala Asn Pro
305                    310                    315                    320
Asn Gln Pro Asp Arg Ala Gly Arg Thr Pro Leu His Ala Ala Val Ala
                 325                    330                    335
Ala Asp Ala Arg Glu Val Cys Gln Leu Leu Leu Arg Ser Arg Gln Thr
            340                    345                    350
Ala Val Asp Ala Arg Thr Glu Asp Gly Thr Thr Pro Leu Met Leu Ala
            355                    360                    365
Ala Arg Leu Ala Val Glu Asp Leu Val Glu Glu Leu Ile Ala Ala Gln
            370                    375                    380
Ala Asp Val Gly Ala Arg Asp Lys Trp Gly Lys Thr Ala Leu His Trp
385                    390                    395                    400
Ala Ala Ala Val Asn Asn Ala Arg Ala Ala Arg Ser Leu Leu Gln Ala
                 405                    410                    415
Gly Ala Asp Lys Asp Ala Gln Asp Asn Arg Glu Gln Thr Pro Leu Phe
            420                    425                    430
Leu Ala Ala Arg Glu Gly Ala Val Glu Val Ala Gln Leu Leu Leu Gly
            435                    440                    445
Leu Gly Ala Ala Arg Glu Leu Arg Asp Gln Ala Gly Leu Ala Pro Ala
            450                    455                    460
Asp Val Ala His Gln Arg Asn His Trp Asp Leu Leu Thr Leu Leu Glu
465                    470                    475                    480
Gly Ala Gly Pro Pro Glu Ala Arg His Lys Ala Thr Pro Gly Arg Glu
                 485                    490                    495
Ala Gly Pro Phe Pro Arg Ala Arg Thr Val Ser Val Ser Val Pro Pro
            500                    505                    510
His Gly Gly Gly Ala Leu Pro Arg Cys Arg Thr Leu Ser Ala Gly Ala
            515                    520                    525
Gly Pro Arg Gly Gly Gly Ala Cys Leu Gln Ala Arg Thr Trp Ser Val
            530                    535                    540
Asp Leu Ala Ala Arg Gly Gly Gly Ala Tyr Ser His Cys Arg Ser Leu
```

```
545                 550                 555                 560
Ser Gly Val Gly Ala Gly Gly Gly Pro Thr Pro Arg Gly Arg Arg Phe
                    565                 570                 575
Ser Ala Gly Met Arg Gly Pro Arg Pro Asn Pro Ala Ile Met Arg Gly
                    580                 585                 590
Arg Tyr Gly Val Ala Ala Gly Arg Gly Gly Arg Val Ser Thr Asp Asp
                595                 600                 605
Trp Pro Cys Asp Trp Val Ala Leu Gly Ala Cys Gly Ser Ala Ser Asn
            610                 615                 620
Ile Pro Ile Pro Pro Pro Cys Leu Thr Pro Ser Pro Glu Arg Gly Ser
625                 630                 635                 640
Pro Gln Leu Asp Cys Gly Pro Pro Ala Leu Gln Glu Met Pro Ile Asn
                    645                 650                 655
Gln Gly Gly Glu Gly Lys Lys Ile Glu Glu Tyr Met Val Gly Arg Asn
                660                 665                 670
Ser Lys Asn Asp Tyr Pro Leu Lys Gly Arg Leu Glu Gly Leu Pro Gly
            675                 680                 685
Phe Lys Met Asp Pro Pro Lys
    690                 695
```

<210> 4851

<211> 211

<212> PRT

<213> Homo sapiens

<400> 4851

```
Met Ser Ser Val Val Gly Leu Phe Leu Cys Phe Thr Ser Cys Ser Ser
1                   5                   10                  15
His Phe Ser Leu Tyr Leu Pro Lys Ser Trp Thr Ile Gln Val Gly Leu
                20                  25                  30
Val Ser Leu Leu Asp Asn Pro Ala Pro Ser His Leu Val Glu Lys Ile
            35                  40                  45
Val Tyr His Ser Lys Tyr Lys Pro Lys Arg Leu Gly Asn Asp Ile Ala
        50                  55                  60
Leu Met Lys Leu Ala Gly Pro Leu Thr Phe Asn Glu Met Ile Gln Pro
```

```
          65                    70                    75                    80
Val Cys Leu Pro Asn Ser Glu Glu Asn Phe Pro Asp Gly Lys Val Cys
                    85                    90                    95
Trp Thr Ser Gly Trp Gly Ala Thr Glu Asp Gly Gly Asp Ala Ser Pro
                    100                   105                   110
Val Leu Asn His Ala Ala Val Pro Leu Ile Ser Asn Lys Ile Cys Asn
                    115                   120                   125
His Arg Asp Val Tyr Gly Gly Ile Ile Ser Pro Ser Met Leu Cys Ala
                    130                   135                   140
Gly Tyr Leu Thr Gly Gly Val Asp Ser Cys Gln Gly Asp Ser Gly Gly
145                   150                   155                   160
Pro Leu Val Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr
                    165                   170                   175
Ser Phe Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly Val Tyr Thr
                    180                   185                   190
Arg Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met Glu Arg Asp
                    195                   200                   205
Leu Lys Thr
          210
```

<210> 4852

<211> 193

<212> PRT

<213> Homo sapiens

<400> 4852

```
Met His Ala Leu Lys Met Thr Trp His Val His Cys Phe Thr Cys Ala
  1                 5                    10                   15
Ala Cys Lys Thr Pro Ile Arg Asn Arg Ala Phe Tyr Met Glu Glu Gly
                    20                   25                   30
Val Pro Tyr Cys Glu Arg Gly Thr His Trp Pro Val Arg Val Arg Arg
                    35                   40                   45
Asp Gly Ala Trp Gly Arg His Glu Ser Arg Ser Ser Phe Ser Leu Pro
          50                   55                   60
Pro Phe Ser Asp Tyr Glu Lys Met Phe Gly Thr Lys Cys His Gly Cys
```

```
       65                    70                    75                    80
Asp Phe Lys Ile Asp Ala Gly Asp Arg Phe Leu Glu Ala Leu Gly Phe
                     85                    90                    95
Ser Trp His Asp Thr Cys Phe Val Cys Ala Val Arg Ala Pro Pro Leu
                    100                   105                   110
Glu Leu Ser Pro Lys Pro Thr Gly Pro Leu Phe Ile Pro Gln Glu Met
            115                   120                   125
Gln Glu Lys Leu Gly Arg Gly Leu Ser Cys Cys Pro Gln Pro His Val
            130                   135                   140
Thr Gly Pro Leu Leu Ser Leu Asp Met Ser Asp Gln Pro Gly Arg Lys
145                   150                   155                   160
Asp Leu Leu Leu Gln Glu Gly Gln Ala Ser Leu Gln Glu Pro Cys Leu
                    165                   170                   175
Leu Ser Cys Val Ser Pro Phe Cys Pro Gln Leu Pro Arg Trp Pro Leu
                    180                   185                   190
Ala
```

<210> 4853

<211> 134

<212> PRT

<213> Homo sapiens

<400> 4853

```
Met Cys Gln Val Tyr Phe Val Lys Leu Leu Ile Leu Gly Val Leu Leu
 1               5                    10                   15
Cys Phe Leu Leu Val Arg Gln Asp Leu Thr Leu Ser Pro Arg Leu Glu
                20                    25                   30
Cys Ser Gly Ala Ile Trp Ala His Cys Asn Pro Arg Leu Leu Gly Ile
            35                    40                   45
Ser Asn Leu Pro Ala Leu Ala Ser Gln Val Ala Glu Thr Thr Gly Met
        50                    55                   60
Ser His His Thr Gln Leu Thr Thr Cys Asn Phe Phe Asp Arg Asp Arg
65                    70                    75                   80
Ser Cys His Val Thr Gln Thr Asp Leu Lys Thr Pro Gly Leu Arg Arg
```

```
                    85                     90                      95
Pro Thr His Leu Gly Leu Pro Lys Cys Trp Asp Tyr Arg Cys Glu Pro
            100                   105                  110
Leu His Leu Thr Gln Phe Val Ile Leu Asn Leu Phe Leu Leu Ser Cys
            115                   120                  125
Phe Ser Phe Phe Phe Leu
    130
```

<210> 4854

<211> 568

<212> PRT   \

<213> Homo sapiens

<400> 4854

```
Met Gly Ser Glu Val Val Ala Gly Asn Ser Val Gly Pro Thr Met Gly
    1                   5                   10                  15
Ala Ala Ser Ser Gly Pro Leu Pro Pro Pro Pro Pro Leu Pro Pro
                20                  25                  30
Ser Ser Asp Thr Pro Glu Thr Val Gln Asn Gly Pro Val Thr Pro Pro
            35                  40                  45
Met Pro Pro Pro Pro Pro Leu Pro Gly Pro Ala Ala Glu Thr Val Pro
        50                  55                  60
Ala Pro Pro Leu Ala Pro Pro Leu Pro Ser Ala Pro Pro Leu Pro Gly
65                  70                  75                  80
Thr Ser Ser Pro Thr Val Val Phe Asn Ser Gly Leu Ala Ala Val Lys
                85                  90                  95
Ile Lys Lys Pro Ile Lys Thr Lys Phe Arg Met Pro Val Phe Asn Trp
            100                 105                 110
Val Ala Leu Lys Pro Asn Gln Ile Asn Gly Thr Val Phe Asn Glu Ile
            115                 120                 125
Asp Asp Glu Arg Ile Leu Glu Asp Leu Asn Val Asp Glu Phe Glu Glu
            130                 135                 140
Ile Phe Lys Thr Lys Ala Gln Gly Pro Ala Ile Asp Leu Ser Ser Ser
145                 150                 155                 160
Lys Gln Lys Ile Pro Gln Lys Gly Ser Asn Lys Val Thr Leu Leu Glu
```

```
                 165                    170                    175
Ala Asn Arg Ala Lys Asn Leu Ala Ile Thr Leu Arg Lys Ala Gly Lys
             180                    185                    190
Thr Ala Asp Glu Ile Cys Lys Ala Ile His Val Phe Asp Leu Lys Thr
             195                    200                    205
Leu Pro Val Asp Phe Val Glu Cys Leu Met Arg Phe Leu Pro Thr Glu
    210                    215                    220
Asn Glu Val Lys Val Leu Arg Leu Tyr Glu Arg Glu Arg Lys Pro Leu
225                    230                    235                    240
Glu Asn Leu Ser Asp Glu Asp Arg Phe Met Met Gln Phe Ser Lys Ile
                 245                    250                    255
Glu Arg Leu Met Gln Lys Met Thr Ile Met Ala Phe Ile Gly Asn Phe
             260                    265                    270
Ala Glu Ser Ile Gln Met Leu Thr Pro Gln Leu His Ala Ile Ile Ala
             275                    280                    285
Ala Ser Val Ser Ile Lys Ser Ser Gln Lys Leu Lys Lys Ile Leu Glu
    290                    295                    300
Ile Ile Leu Ala Leu Gly Asn Tyr Met Asn Ser Ser Lys Arg Gly Ala
305                    310                    315                    320
Val Tyr Gly Phe Lys Leu Gln Ser Leu Asp Leu Leu Leu Asp Thr Lys
                 325                    330                    335
Ser Thr Asp Arg Lys Gln Thr Leu Leu His Tyr Ile Ser Asn Val Val
             340                    345                    350
Lys Glu Lys Tyr His Gln Val Ser Leu Phe Tyr Asn Glu Leu His Tyr
             355                    360                    365
Val Glu Lys Ala Ala Ala Val Ser Leu Glu Asn Val Leu Leu Asp Val
             370                    375                    380
Lys Glu Leu Gln Arg Gly Met Asp Leu Thr Lys Arg Glu Tyr Thr Met
385                    390                    395                    400
His Asp His Asn Thr Leu Leu Lys Glu Phe Ile Leu Asn Asn Glu Gly
                 405                    410                    415
Lys Leu Lys Lys Leu Gln Asp Asp Ala Lys Ile Ala Gln Asp Ala Phe
             420                    425                    430
Asp Asp Val Val Lys Tyr Phe Gly Glu Asn Pro Lys Thr Thr Pro Pro
             435                    440                    445
Ser Val Phe Phe Pro Val Phe Val Arg Phe Val Lys Ala Tyr Lys Gln
```

```
        450                455                460
Ala Glu Glu Glu Asn Glu Leu Arg Lys Lys Gln Glu Gln Ala Leu Met
465                 470                475                480
Glu Lys Leu Leu Glu Gln Glu Ala Leu Met Glu Gln Gln Asp Pro Lys
                485                490                495
Ser Pro Ser His Lys Ser Lys Arg Gln Gln Gln Glu Leu Ile Ala Glu
                500                505                510
Leu Arg Arg Arg Gln Val Lys Asp Asn Arg His Val Tyr Glu Gly Lys
                515                520                525
Asp Gly Ala Ile Glu Asp Ile Ile Thr Ala Leu Lys Lys Asn Asn Ile
                530                535                540
Thr Lys Phe Pro Asn Val His Ser Arg Val Arg Ile Ser Ser Ser Thr
545                 550                555                560
Pro Val Val Glu Asp Thr Gln Ser
                565
```

<210> 4855

<211> 415

<212> PRT

<213> Homo sapiens

<400> 4855

```
Met Thr Leu Ala Ala Ser Ser Gln Arg Ser Gln Ile Ile Arg Ser Lys
1                   5                  10                  15
Phe Arg Ser Val Leu Gln Leu Arg Ile His Arg Arg Asn Gln Glu Gln
                20                 25                  30
Ile Ser Asp Pro Asp Pro Trp Ile Ser Ala Ser Asp Pro Pro Leu Ala
                35                 40                  45
Pro Ala Leu Pro Ser Gly Thr Ala Pro Phe Leu Phe Ser Pro Gly Val
                50                 55                  60
Leu Leu Pro Glu Pro Glu Tyr Cys Pro Pro Trp Arg Ser Pro Lys Lys
65                  70                 75                  80
Glu Ser Pro Lys Ile Ser Gln Arg Trp Arg Glu Ser Lys Pro Arg Gly
                85                 90                  95
Asn Leu Thr Tyr His Gln Tyr Met Pro Pro Glu Pro Arg Gln Gly Ser
```

```
                100                    105                    110
Arg Ala Asp Pro Gln Ala Glu Gly Ser Ala Leu Gly Pro Pro Gly Pro
            115                    120                    125
Ser Leu Trp Glu Gly Thr Asp Ser Gln Gln Pro His Pro Arg Met Lys
            130                    135                    140
Pro Ser Pro Leu Thr Pro Cys Pro Pro Gly Val Pro Ser Pro Ser Pro
145                    150                    155                    160
Pro Pro His Lys Leu Glu Leu Gln Thr Leu Lys Leu Glu Glu Leu Thr
                165                    170                    175
Val Ser Glu Leu Arg Gln Gln Leu Arg Leu Arg Gly Leu Pro Val Ser
                180                    185                    190
Gly Thr Lys Ser Met Leu Leu Glu Arg Met Arg Gly Gly Ala Pro Pro
            195                    200          .         205
Arg Glu Arg Pro Lys Pro Arg Arg Glu Asp Ser Pro Ala Gly Ala Pro
            210                    215                    220
Trp Pro Arg Leu Lys Pro Lys Ala Leu Ala Ala Ala Arg Arg Gln Gly
225                    230                    235                    240
Ser Val Lys Pro Ser Ala Ala Ser His Arg Pro Pro Leu Pro Arg Ala
                245                    250                    255
Ala Asp Thr Pro Gly Thr Ala Pro Ala Pro Thr Pro Thr Pro Ala Pro
                260                    265                    270
Ala Ala Ala Pro Ala Leu Thr Pro Ser Ser Gly Pro Gly Ser Ala Ala
            275                    280                    285
Leu Thr Leu Glu Glu Glu Leu Gln Glu Ala Ile Arg Arg Ala Gln Leu
            290                    295                    300
Leu Pro Asn Arg Gly Ile Asp Asp Ile Leu Glu Asp Gln Val Glu Pro
305                    310                    315                    320
Asp Asp Pro Leu Pro Pro Ile Pro Leu Asp Phe Pro Gly Ser Phe Asp
                325                    330                    335
Val Leu Ser Pro Ser Pro Asp Ser Glu Gly Leu Ser Ser Val Phe Ser
                340                    345                    350
Ser Ser Leu Pro Ser Pro Thr Asn Ser Ser Ser Pro Ser Pro Arg Asp
            355                    360                    365
Pro Thr Asp Ser Leu Asp Trp Leu Glu Ala Leu Ser Gly Gly Pro Pro
            370                    375                    380
Leu Gly Ser Gly Pro Pro Pro Pro Ser Ile Phe Ser Ala Asp Leu Ser
```

385   390   395   400
Asp Ser Ser Ser Ser Arg Leu Trp Asp Leu Leu Glu Asp Pro Trp
                    405   410   415

<210> 4856

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4856

Met Ser Cys Tyr Pro Thr Phe Asp Trp Ala Thr Trp Ala Glu Gly Glu
 1   5   10   15

Lys Gly Val Trp Lys Ser Pro Pro Ser Ile Gln Thr Gly Asp Gln Ile
                    20   25   30

Gly Val Arg Glu Glu Leu Leu Asn Ala Leu His Ser Ser Leu Ala Arg
         35   40   45

Pro Ala Ile Lys Lys His Gln His Pro Lys Gly Lys Lys Lys Arg Arg
         50   55   60

Ser Arg Glu Lys His Gln Glu Ser Thr Thr Asp Pro Gly Ser Pro Lys
65   70   75   80

Lys Cys Arg Ala Arg Phe Gly Leu Asn Gln Gln Thr Asp Trp Cys Gly
                    85   90   95

Pro Cys Arg Arg Lys Lys Lys Cys Ile Arg Tyr Leu Pro Gly Glu Gly
                    100   105   110

Arg Cys Pro Ser Pro Val. Pro Ser Asp Asp Ser Ala Leu Gly Cys Pro
         115   120   125

Gly Ser Pro Ala Pro Gln Asp Ser Pro Ser Tyr His Leu Leu Pro Arg
         130   135   140

Phe Pro Thr Glu Leu Leu Thr Ser Pro Ala Glu Pro Ala Pro Thr Ser
145   150   155   160

Pro Gly Leu Ser Thr Ala Leu Ser Leu Pro Thr Pro Gly Pro Pro Gln
                    165   170   175

Ala Pro Arg Ser Thr Leu Gln Ser Thr Gln Val Gln Gln Gln Glu Ser
         180   185   190

Gln Arg Gln Val Ala

195

<210> 4857

<211> 209

<212> PRT

<213> Homo sapiens

<400> 4857

```
Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
 1               5                  10                  15
Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
                20                  25                  30
Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
                35                  40                  45
Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
            50                  55                  60
Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
65                  70                  75                  80
Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
                85                  90                  95
Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly
                100                 105                 110
Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
            115                 120                 125
Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
            130                 135                 140
Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
145                 150                 155                 160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Phe
                165                 170                 175
Leu Leu Asn Ile Arg Gly Phe Thr Pro Lys Lys Asn Leu Ile Asn Val
            180                 185                 190
Ala Asn Val Lys Lys Arg Leu Val Arg Ile Gln Pro Leu Phe Asp Ile
            195                 200                 205
Arg
```

<210> 4858

<211> 259

<212> PRT

<213> Homo sapiens

<400> 4858

Met Glu Cys His Leu Lys Thr His Tyr Lys Met Glu Tyr Lys Cys Arg
1   5   10   15

Ile Cys Gln Thr Val Lys Ala Asn Gln Leu Glu Leu Glu Thr Arg Thr
                20   25   30

Arg Glu His Arg Leu Gly Asn His Tyr Lys Cys Asp Gln Cys Gly Tyr
            35   40   45

Leu Ser Lys Thr Ala Asn Lys Leu Ile Glu His Val Arg Val His Thr
        50   55   60

Gly Glu Arg Pro Phe His Cys Asp Gln Cys Ser Tyr Ser Cys Lys Arg
65   70   75   80

Lys Asp Asn Leu Asn Leu His Lys Lys Leu Lys His Ala Pro Arg Gln
                85   90   95

Thr Phe Ser Cys Glu Glu Cys Leu Phe Lys Thr Thr His Pro Phe Val
                100   105   110

Phe Ser Arg His Val Lys Lys His Gln Ser Gly Asp Cys Pro Glu Glu
            115   120   125

Asp Lys Lys Gly Leu Cys Pro Ala Pro Lys Glu Pro Ala Gly Pro Gly
        130   135   140

Ala Pro Leu Leu Val Val Gly Ser Ser Arg Asn Leu Leu Ser Pro Leu
145   150   155   160

Ser Val Met Ser Ala Ser Gln Ala Leu Gln Thr Val Ala Leu Ser Ala
                165   170   175

Ala His Gly Ser Ser Ser Glu Pro Asn Leu Ala Leu Lys Ala Leu Ala
                180   185   190

Phe Asn Gly Ser Pro Leu Arg Phe Asp Lys Tyr Arg Asn Ser Asp Phe
                195   200   205

Ala His Leu Ile Pro Leu Thr Met Leu Tyr Pro Lys Asn His Leu Asp

```
         210                    215                    220
Leu Thr Phe His Pro Pro Arg Pro Gln Thr Ala Pro Pro Ser Ile Pro
225                    230                    235                    240
Ser Pro Lys His Pro Phe Leu Ala Tyr Leu Gly Leu Arg Glu Arg Ala
                    245                    250                    255
Glu Thr Val
```

<210> 4859

<211> 160

<212> PRT

<213> Homo sapiens

<400> 4859

```
Met Ile Ser Ala Tyr Cys Asn Leu His Leu Leu Gly Ser Ser Asn Ser
 1                   5                   10                  15
Ser Ala Ser Ala Ser Gln Val Ala Gly Ile Thr Gly Ala Cys Gln His
                   20                  25                  30
Ala Trp Leu Ile Trp Gly Tyr Ser Ser Phe Leu Arg Gln Ser Phe Ala
                   35                  40                  45
Leu Ser Pro Lys Leu Glu Cys Ser Gly Thr Ile Ser Ala Leu Cys Ser
        50                  55                  60
Leu Cys Leu Leu Gly Ser Ser Asp Ser Pro Ser Ser Ala Ser Gln Val
65                  70                  75                  80
Ala Gly Ile Thr Gly Ala Cys Tyr His Ala Gln Leu Ile Phe Val Phe
                   85                  90                  95
Leu Val Gln Met Arg Phe His His Leu Gly Gln Ala Gly Leu Glu Leu
                   100                 105                 110
Leu Thr Ser Ser Asp Leu Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile
                   115                 120                 125
Thr Asp Val Asn His His Ala Gln Pro Leu Trp Gly Tyr Ser Cys Pro
        130                 135                 140
Tyr Phe Ser Phe Ile Val Leu Tyr Lys Lys Val Val Leu Leu Tyr Leu
145                 150                 155                 160
```

<210> 4860

<211> 276

<212> PRT

<213> Homo sapiens

<400> 4860

```
Met Asn Val Gln Ser Ser Arg Ser His Ala Ile Phe Thr Ile His Leu
 1               5                  10                  15
Cys Gln Met Arg Met Cys Thr Gln Pro Asp Leu Val Asn Glu Ala Val
                20                  25                  30
Thr Gly Leu Pro Asp Gly Thr Pro Pro Ser Ser Glu Tyr Glu Thr Leu
            35                  40                  45
Thr Ala Lys Phe His Phe Val Asp Leu Ala Gly Ser Glu Arg Leu Lys
        50                  55                  60
Arg Thr Gly Ala Thr Gly Glu Arg Ala Lys Glu Gly Ile Ser Ile Asn
65                  70                  75                  80
Cys Gly Leu Val Gly Thr Trp Trp Val Ile Ser Pro Ser Thr His Thr
                85                  90                  95
Ala Gln Ser Gln Thr Pro Pro Arg Pro Cys Ser Pro Thr Pro Ala Glu
                100                 105                 110
Ser Ser Leu Asp Ile Leu Pro Ile Ser Pro Ser Leu Ser Gly Val Thr
            115                 120                 125
Pro Val Pro Ser Phe Pro Ile Ser Pro Thr Tyr Pro Cys Ala Tyr Lys
        130                 135                 140
Pro Thr Gln Gly Ala Arg Gly Leu Leu Gly Pro Lys Arg Gln Leu Ala
145                 150                 155                 160
Leu Gly Asn Val Ile Ser Ala Leu Gly Asp Gln Ser Lys Lys Val Val
                165                 170                 175
His Val Ser Tyr Arg Asp Ser Lys Leu Thr Arg Leu Leu Gln Asp Ser
                180                 185                 190
Leu Gly Gly Asn Ser Gln Thr Ile Met Ile Ala Cys Val Ser Pro Ser
            195                 200                 205
Asp Arg Asp Phe Met Glu Thr Leu Asn Thr Leu Lys Tyr Ala Asn Arg
        210                 215                 220
Ala Arg Asn Ile Lys Asn Lys Val Val Val Asn Gln Asp Lys Thr Ser
```

```
225                    230                    235                    240
Gln Gln Ile Ser Ala Leu Arg Ala Glu Ile Ala Arg Leu Gln Met Glu
                    245                    250                    255
Leu Met Glu Tyr Lys Ala Val Ser Met Leu Leu Gly Ile Ala Gln His
                    260                    265                    270
Ser Pro Trp Ser
        275
```

<210> 4861

<211> 159

<212> PRT

<213> Homo sapiens

<400> 4861

```
Met Gln Gly Ala Glu Leu His Pro Arg Cys His Ala Trp Val Ser Val
 1                   5                   10                  15
Phe Ala Leu Gly Leu Thr Leu Lys Arg Thr Gly Gln Pro Gln Ala Pro
                    20                  25                  30
Ser Thr Gly Asp Leu Pro Ser Gly Pro Ala Gly Lys Ala Gly Ser Arg
                35                  40                  45
Glu Leu Arg Gly Glu Pro Pro Thr Trp Val Trp His Pro Pro Ile Ser
            50                  55                  60
Asp Asn Phe His Gln Glu Asp Ser Lys Arg Pro His Val Cys Phe Asp
65                  70                  75                  80
Gly Glu Asp Pro Glu Val Asp Gly Phe Arg Gly Cys Pro Leu Asp Gly
                85                  90                  95
Glu Leu Gly Pro Cys Gly Lys Ser His Ala Ser Phe Gly Arg Pro Arg
                100                 105                 110
Pro Val Ala Pro Thr Leu His Pro His Pro Tyr Pro Cys Ser Cys Cys
            115                 120                 125
Pro Ser Ile Lys Pro Pro Leu Arg Gly Leu Thr Gly Arg Gly Gly Gln
        130                 135                 140
Ala Trp Arg Gly Ser His Tyr Arg Thr Pro Gly His Met Thr Arg
145                 150                 155
```

<210> 4862

<211> 781

<212> PRT

<213> Homo sapiens

<400> 4862

Met Lys Ser Ser Gly Pro Val Glu Arg Leu Leu Arg Ala Leu Gly Arg
1   5   10   15

Arg Asp Ser Ser Arg Ala Ala Ser Arg Pro Arg Lys Ala Glu Pro His
                20   25   30

Ser Phe Arg Glu Lys Val Phe Arg Lys Lys Pro Pro Val Cys Ala Val
            35   40   45

Cys Lys Val Thr Ile Asp Gly Thr Gly Val Ser Cys Arg Val Cys Lys
        50   55   60

Val Ala Thr His Arg Lys Cys Glu Ala Lys Val Thr Ser Ala Cys Gln
65   70   75   80

Ala Leu Pro Pro Val Glu Leu Arg Arg Asn Thr Ala Pro Val Arg Arg
                85   90   95

Ile Glu His Leu Gly Ser Thr Lys Ser Leu Asn His Ser Lys Gln Arg
            100   105   110

Ser Thr Leu Pro Arg Ser Phe Ser Leu Asp Pro Leu Met Glu Arg Arg
            115   120   125

Trp Asp Leu Asp Leu Thr Tyr Val Thr Glu Arg Ile Leu Ala Ala Ala
        130   135   140

Phe Pro Ala Arg Pro Asp Glu Gln Arg His Arg Gly His Leu Arg Glu
145   150   155   160

Leu Ala His Val Leu Gln Ser Lys His Arg Asp Lys Tyr Leu Leu Phe
                165   170   175

Asn Leu Ser Glu Lys Arg His Asp Leu Thr Arg Leu Asn Pro Lys Val
            180   185   190

Gln Asp Phe Gly Trp Pro Glu Leu His Ala Pro Pro Leu Asp Lys Leu
            195   200   205

Cys Ser Ile Cys Lys Ala Met Glu Thr Trp Leu Ser Ala Asp Pro Gln
        210   215   220

His Val Val Val Leu Tyr Cys Lys Gly Asn Lys Gly Lys Leu Gly Val

225   230   235   240

Ile Val Ser Ala Tyr Met His Tyr Ser Lys Ile Ser Ala Gly Ala Asp

              245   250   255

Gln Ala Leu Ala Thr Leu Thr Met Arg Lys Phe Cys Glu Asp Lys Val

              260   265   270

Ala Thr Glu Leu Gln Pro Ser Gln Arg Arg Tyr Ile Ser Tyr Phe Ser

              275   280   285

Gly Leu Leu Ser Gly Ser Ile Arg Met Asn Ser Ser Pro Leu Phe Leu

              290   295   300

His Tyr Val Leu Ile Pro Met Leu Pro Ala Phe Glu Pro Gly Thr Gly

305   310   315   320

Phe Gln Pro Phe Leu Lys Ile Tyr Gln Ser Met Gln Leu Val Tyr Thr

              325   330   335

Ser Gly Val Tyr His Ile Ala Gly Pro Gly Pro Gln Gln Leu Cys Ile

              340   345   350

Ser Leu Glu Pro Ala Leu Leu Leu Lys Gly Asp Val Met Val Thr Cys

              355   360   365

Tyr His Lys Gly Gly Arg Gly Thr Asp Arg Thr Leu Val Phe Arg Val

              370   375   380

Gln Phe His Thr Cys Thr Ile His Gly Pro Gln Leu Thr Phe Pro Lys

385   390   395   400

Asp Gln Leu Asp Glu Ala Trp Thr Asp Glu Arg Phe Pro Phe Gln Ala

              405   410   415

Ser Val Glu Phe Val Phe Ser Ser Ser Pro Glu Lys Ile Lys Gly Ser

              420   425   430

Thr Pro Arg Asn Asp Pro Ser Val Ser Val Asp Tyr Asn Thr Thr Glu

              435   440   445

Pro Ala Val Arg Trp Asp Ser Tyr Glu Asn Phe Asn Gln His His Glu

         450   455   460

Asp Ser Val Asp Gly Ser Leu Thr His Thr Arg Gly Pro Leu Asp Gly

465   470   475   480

Ser Pro Tyr Ala Gln Val Gln Arg Pro Pro Arg Gln Thr Pro Pro Ala

              485   490   495

Pro Ser Pro Glu Pro Pro Pro Pro Met Leu Ser Val Ser Ser Asp

              500   505   510

Ser Gly His Ser Ser Thr Leu Thr Thr Glu Pro Ala Ala Glu Ser Pro
          515   520   525

Gly Arg Pro Pro Pro Thr Ala Ala Glu Arg Gln Glu Leu Asp Arg Leu
          530   535   540

Leu Gly Gly Cys Gly Val Ala Ser Gly Gly Arg Gly Ala Gly Arg Glu
545   550   555   560

Thr Ala Ile Leu Asp Asp Glu Glu Gln Pro Thr Val Gly Gly Gly Pro
                565   570   575

His Leu Gly Val Tyr Pro Gly His Arg Pro Gly Leu Ser Arg His Cys
          580   585   590

Ser Cys Arg Gln Gly Tyr Arg Glu Pro Cys Gly Val Pro Asn Gly Gly
          595   600   605

Tyr Tyr Arg Pro Glu Gly Thr Leu Glu Arg Arg Arg Leu Ala Tyr Gly
          610   615   620

Gly Tyr Glu Gly Ser Pro Gln Gly Tyr Ala Glu Ala Ser Met Glu Lys
625   630   635   640

Arg Arg Leu Cys Arg Ser Leu Ser Glu Gly Leu Tyr Pro Tyr Pro Pro
                645   650   655

Glu Met Gly Lys Pro Ala Thr Gly Asp Phe Gly Tyr Arg Ala Ser Ser
          660   665   670

Ala Ala Leu Ser Cys Ser Pro Arg Pro Thr Pro Ala Val Val His Phe
          675   680   685

Lys Val Ser Ala Gln Gly Ile Thr Leu Thr Asp Asn Gln Arg Lys Leu
          690   695   700

Phe Phe Arg Arg His Tyr Pro Val Asn Ser Ile Thr Phe Ser Ser Thr
705   710   715   720

Asp Pro Gln Asp Arg Arg Trp Thr Asn Pro Asp Gly Thr Thr Ser Lys
                725   730   735

Ile Phe Gly Phe Val Ala Lys Lys Pro Gly Ser Pro Trp Glu Asn Val
          740   745   750

Cys His Leu Phe Ala Glu Leu Asp Pro Asp Gln Pro Ala Gly Ala Ile
          755   760   765

Val Thr Phe Ile Thr Lys Val Leu Leu Gly Gln Arg Lys
          770   775   780

<210> 4863
<211> 114
<212> PRT
<213> Homo sapiens

<400> 4863

Met Ile Lys Glu Leu Thr Gln Asn Leu Asn Thr Phe Phe Ile Glu Phe
1   5   10   15

Ile Tyr Gly Cys Leu Leu Phe Val Glu Phe Phe Ser Ser Leu Phe Ser
                20   25   30

Phe Phe Phe Ser Phe Leu Ser Ser Leu Leu Phe Ser Phe Phe Ser Val
            35   40   45

Ala Gln Ala Gly Val Gln Trp His Asp Leu Gly Ser Leu Gln Pro Pro
        50   55   60

Pro Pro Arg Phe Lys His Leu Ser Cys Leu Ser Leu Pro Ser Ser Trp
65   70   75   80

Asp Tyr Arg Cys Pro Pro Pro Ser Pro Ala Asn Phe Cys Ile Phe Ser
                85   90   95

Arg Asp Arg Val Ser Pro Cys Trp Leu Gly Trp Ser Arg Thr Ser Asp
                100   105   110

Leu Lys

<210> 4864
<211> 141
<212> PRT
<213> Homo sapiens

<400> 4864

Met Pro Val Ile Pro Ala Leu Gly Glu Ala Lys Gly Glu Val Leu Pro
1   5   10   15

Pro Gly Asp Thr Thr Thr Ile Ile Pro Leu Asn Trp Met Leu Lys Ser
                20   25   30

Pro Pro Gly His Phe Gly Leu Leu Leu Leu Ser Gln Gln Ala Lys
            35   40   45

Asn Gly Val Met Val Leu Ala Gly Val Thr Asp Pro Glu Tyr Gln Asp
    50   55   60

Glu Ile Ser Leu Leu Leu His Asn Glu Gly His Leu Lys Glu Val Lys
 65   70   75   80

Met Glu Gly Ala Arg Leu Gly Leu Pro Gly Arg Ala Glu Ser Leu Glu
          85   90   95

His Gln Val Gln Ser His Leu Asn Met Ile Ala Gln Ser Gln Arg Thr
         100   105   110

Phe Gln Lys Lys Asp Ala Gly Lys Ala Ile Ile Leu Ser Lys Leu Thr
         115   120   125

Gln Glu Gln Lys Thr Lys His Cys Met Phe Ser Leu His
         130   135   140

<210> 4865

<211> 731

<212> PRT

<213> Homo sapiens

<400> 4865

Met His Leu Arg Leu Arg Pro Glu Val Gly Arg Ser Arg Ala Arg Ser
  1   5   10   15

Gly Glu Pro Ala Gly Ser Ala Ala Ala Arg Glu Val Met Ala Ala Ala
          20   25   30

Pro Ala Arg Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Cys Ser
         35   40   45

Gly Ser Gly Ser Ser Ala Ser Arg Gly Phe Tyr Phe Asn Thr Val Leu
         50   55   60

Ser Leu Ala Arg Ser Leu Ala Val Gln Arg Pro Ala Ser Leu Glu Lys
 65   70   75   80

Val Arg Lys Leu Leu Cys Met Cys Pro Val Asp Phe His Gly Ile Phe
          85   90   95

Gln Leu Asp Glu Arg Arg Arg Asp Ala Val Ile Ala Leu Gly Ile Phe
         100   105   110

Leu Ile Glu Ser Asp Leu Gln His Lys Asp Cys Val Val Pro Tyr Leu
         115   120   125

Leu Arg Leu Leu Lys Gly Leu Pro Lys Val Tyr Trp Val Glu Glu Ser
    130   135   140

Thr Ala Arg Lys Gly Arg Gly Ala Leu Pro Val Ala Glu Ser Phe Ser
145   150   155   160

Phe Cys Leu Val Thr Leu Leu Ser Asp Val Ala Tyr Arg Asp Pro Ser
            165   170   175

Leu Arg Asp Glu Ile Leu Glu Val Leu Leu Gln Val Leu His Val Leu
            180   185   190

Leu Gly Met Cys Gln Ala Leu Glu Ile Gln Asp Lys Glu Tyr Leu Cys
            195   200   205

Lys Tyr Ala Ile Pro Cys Leu Ile Gly Ile Ser Arg Ala Phe Gly Arg
    210   215   220

Tyr Ser Asn Met Glu Glu Ser Leu Leu Ser Lys Leu Phe Pro Lys Ile
225   230   235   240

Pro Pro His Ser Leu Arg Val Leu Glu Glu Leu Glu Gly Val Arg Arg
            245   250   255

Arg Ser Phe Asn Asp Phe Arg Ser Ile Leu Pro Ser Asn Leu Leu Thr
            260   265   270

Val Cys Gln Glu Gly Thr Leu Lys Arg Lys Thr Ser Ser Val Ser Ser
            275   280   285

Ile Ser Gln Val Ser Pro Glu Arg Gly Met Pro Pro Pro Ser Ser Pro
    290   295   300

Gly Gly Ser Ala Phe His Tyr Phe Glu Ala Ser Cys Leu Pro Asp Gly
305   310   315   320

Thr Ala Leu Glu Pro Glu Tyr Tyr Phe Ser Thr Ile Ser Ser Ser Phe
            325   330   335

Ser Val Ser Pro Leu Phe Asn Gly Val Thr Tyr Lys Glu Phe Asn Ile
            340   345   350

Pro Leu Glu Met Leu Arg Glu Leu Leu Asn Leu Val Lys Lys Ile Val
            355   360   365

Glu Glu Ala Val Leu Lys Ser Leu Asp Ala Ile Val Ala Ser Val Met
    370   375   380

Glu Ala Asn Pro Ser Ala Asp Leu Tyr Tyr Thr Ser Phe Ser Asp Pro
385   390   395   400

Leu Tyr Leu Thr Met Phe Lys Met Leu Arg Asp Thr Leu Tyr Tyr Met
            405   410   415

Lys Asp Leu Pro Thr Ser Phe Val Lys Glu Ile His Asp Phe Val Leu
           420   425   430

Glu Gln Phe Asn Thr Ser Gln Gly Glu Leu Gln Lys Ile Leu His Asp
           435   440   445

Ala Asp Arg Ile His Asn Glu Leu Ser Pro Leu Lys Leu Arg Cys Gln
           450   455   460

Ala Asn Ala Ala Cys Val Asp Leu Met Val Trp Ala Val Lys Asp Glu
465   470   475   480

Gln Gly Ala Glu Asn Leu Cys Ile Lys Leu Ser Glu Lys Leu Gln Ser
              485   490   495

Lys Thr Ser Ser Lys Val Ile Ile Ala His Leu Pro Leu Leu Ile Cys
           500   505   510

Cys Leu Gln Gly Leu Gly Arg Leu Cys Glu Arg Phe Pro Val Val Val
           515   520   525

His Ser Val Thr Pro Ser Leu Arg Asp Phe Leu Val Ile Pro Ser Pro
           530   535   540

Val Leu Val Lys Leu Tyr Lys Tyr His Ser Gln Tyr His Thr Val Ala
545   550   555   560

Gly Asn Asp Ile Lys Ile Ser Val Thr Asn Glu His Ser Glu Ser Thr
              565   570   575

Leu Asn Val Met Ser Gly Lys Lys Ser Gln Pro Ser Met Tyr Glu Gln
           580   585   590

Leu Arg Asp Ile Ala Ile Asp Asn Ile Cys Arg Cys Leu Lys Ala Gly
           595   600   605

Leu Thr Val Asp Pro Val Ile Val Glu Ala Phe Leu Ala Ser Leu Ser
           610   615   620

Asn Arg Leu Tyr Ile Ser Gln Glu Ser Asp Lys Asp Ala His Leu Ile
625   630   635   640

Pro Asp His Thr Ile Arg Ala Leu Gly His Ile Ala Val Ala Leu Arg
              645   650   655

Asp Thr Pro Lys Val Met Glu Pro Ile Leu Gln Ile Leu Gln Gln Lys
           660   665   670

Phe Cys Gln Pro Pro Ser Pro Leu Asp Val Leu Ile Ile Asp Gln Leu
           675   680   685

Gly Cys Leu Val Ile Thr Gly Asn Gln Tyr Ile Tyr Gln Glu Val Trp
           690   695   700

Asn Leu Phe Gln Gln Ile Ser Val Lys Ala Ser Ser Val Val Tyr Ser
705   710   715   720
Ala Thr Lys Asp Tyr Lys Asp His Gly Tyr Arg
                725   730

<210> 4866

<211> 288

<212> PRT

<213> Homo sapiens

<400> 4866

Met Ser Arg Glu Leu Ala Pro Leu Leu Leu Leu Leu Leu Ser Ile His
1   5   10   15
Ser Ala Leu Ala Met Arg Ile Cys Ser Phe Asn Val Arg Ser Phe Gly
                20   25   30
Glu Ser Lys Gln Glu Asp Lys Asn Ala Met Asp Val Ile Val Lys Val
         35   40   45
Ile Lys Arg Cys Asp Ile Ile Leu Val Met Glu Ile Lys Asp Ser Asn
         50   55   60
Asn Arg Ile Cys Pro Ile Leu Met Glu Lys Leu Asn Arg Asn Ser Arg
65   70   75   80
Arg Gly Ile Thr Tyr Asn Tyr Val Ile Ser Ser Arg Leu Gly Arg Asn
                85   90   95
Thr Tyr Lys Glu Gln Tyr Ala Phe Leu Tyr Lys Glu Lys Leu Val Ser
                100   105   110
Val Lys Arg Ser Tyr His Tyr His Asp Tyr Gln Asp Gly Asp Ala Asp
         115   120 .   125
Val Phe Ser Arg Glu Pro Phe Val Val Trp Phe Gln Ser Pro His Thr
         130   135   140
Ala Val Lys Asp Phe Val Ile Ile Pro Leu His Thr Thr Pro Glu Thr
145   150   155   160
Ser Val Lys Glu Ile Asp Glu Leu Val Glu Val Tyr Thr Asp Val Lys
                165   170   175
His Arg Trp Lys Ala Glu Asn Phe Ile Phe Met Gly Asp Phe Asn Ala
                180   185   190

```
Gly Cys Ser Tyr Val Pro Lys Lys Ala Trp Lys Asn Val Arg Leu Arg
        195             200             205

Thr Asp Pro Arg Phe Val Trp Leu Ile Gly Asp Gln Glu Asp Thr Thr
        210             215             220

Val Lys Lys Ser Thr Asn Cys Ala Tyr Asp Arg Ile Val Leu Arg Gly
225             230             235             240

Gln Glu Ile Val Ser Ser Val Val Pro Lys Ser Asn Ser Val Phe Asp
                245             250             255

Phe Gln Lys Ala Tyr Lys Leu Thr Glu Glu Glu Val Arg Leu Pro Ser
            260             265             270

Cys Leu Ser Met Pro Leu Ser Trp Lys Asp Glu Leu Ala Trp Ala Thr
            275             280             285
```

<210> 4867

<211> 143

<212> PRT

<213> Homo sapiens

<400> 4867

```
Met Pro Ser Thr Pro Ser Ser Arg Arg Ser Arg Asn Ser Ser Arg Ser
  1             5               10              15

Pro Pro Gln Thr Ala Asp Cys Trp Ala Ser Ser Lys Ala Arg Thr Pro
            20              25              30

Ser Ser Thr Glu Leu Gln Pro Cys Leu Glu Gly Arg Pro Pro Ser Cys
            35              40              45

His Pro Asp Leu Ser Gly Ser Pro Phe Pro Pro Ser Leu Asp Pro Lys
        50              55              60

Ser Gly Ala Ile His Gln Glu Cys Arg Pro Leu Val Gly Gly Ala Gly
65              70              75              80

Cys Cys Leu Pro Ile Gly Gln Leu Leu Pro Glu Met Gln Met Arg Leu
            85              90              95

Leu Glu Thr Gly Trp Glu Leu Ala Glu Pro Arg Trp Arg Arg Gly Ser
            100             105             110

Ala Pro Gly His Phe Thr Gly Arg Glu Gly Glu Gly Lys Lys Ser Leu
            115             120             125
```

Arg Leu Trp Asp Thr Asp Ser Gln Asn Lys His Ile Cys Gly Cys
    130   135   140

<210> 4868

<211> 281

<212> PRT

<213> Homo sapiens

<400> 4868

Met Ala Val Asp Ser Leu Leu Arg Ile Leu Lys Thr Leu Arg Leu Asp
  1   5   10   15

Phe Ile Gln Glu Leu Glu Val Phe Tyr Trp Cys Arg Asp Phe Leu Val
            20   25   30

Leu Ala Glu Pro Asn Leu Ser Ala Ile Gln Leu Gly Arg Ile Phe Asn
        35   40   45

Leu Arg Ser Leu Lys Leu Phe Tyr Tyr Lys Trp Ala Phe Ser Ser Trp
    50   55   60

Val Arg Arg Pro Ser Ser Tyr Phe Phe Ser Gln Leu Thr Met Leu Gly
 65   70   75   80

His Leu Arg Lys Leu His Leu Ser His Ser Tyr Leu Val Gly Lys Leu
            85   90   95

His Tyr Ile Leu Ser Cys Leu Trp Val Pro Leu His Ser Leu Glu Ile
            100   105   110

Cys Asn Cys Lys Leu Leu Asp Thr Asp Ile Thr Tyr Leu Ser Arg Ser
        115   120   125

His His Thr Thr Cys Leu Lys Lys Leu Asp Leu Ser Val Asn Asp Leu
    130   135   140

Ser Tyr Met Ile Pro Gly Pro Leu Gly Thr Leu Leu Arg Ala Val Ser
145   150   155   160

Gly Thr Leu Gln His Leu Asp Leu Lys His Cys Trp Leu Lys Asp Ala
            165   170   175

His Leu Ser Ala Leu Leu Pro Ala Leu Cys Arg Cys Ser His Leu Ser
        180   185   190

Ser Leu Ser Leu Ser Asp Asn Pro Ile Ser Ser Ala Cys Leu Leu Ser
        195   200   205

Leu Leu Glu His Thr Met Gly Leu Met Glu Leu Lys Gln Val Leu Tyr
    210   215   220

Pro Ile Pro Val Asp Cys Cys Ile Tyr Leu His Gly Val Cys Arg Gly
225   230   235   240

Pro Val Asn Glu Asp Lys Leu Cys Gln Leu Gln Ala Glu Ile Gln Lys
            245   250   255

Gln Leu Gln Ala Met Gln Gln Ala Asp Met Gln Trp Ser Pro Ser Thr
            260   265   270

Val Phe Ala Tyr Ala Ala Gly Ala Val
            275   280

<210> 4869

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4869

Met Val Gln Ala Pro Cys Leu Val Val Leu Ser Phe His Val Val Leu

1   5   10   15

Ser Leu Gln Val His Arg Ser Gln Glu Leu Gly Phe Trp Asn Leu His
            20   25   30

Leu Asp Phe Arg Arg Cys Met Glu Met Pro Gly Cys Pro Gly Arg Asn
            35   40   45

Leu Leu Gln Gly Trp Gly Ser His Gly Glu Pro Leu Leu Gly Gln Cys
          50   55   60

Arg Arg Glu Met Trp Gly Gly Ser Pro Thr Gln Ser Pro Tyr Trp Gly
65   70   75   80

Thr Val Leu Gln Thr Gln Asn Gly Arg Ser Thr Asp Ser Leu His Cys
            85   90   95

Val Pro Gly Lys Ala Thr Asp Thr Gln Cys Gln Pro Met Lys Ala Thr
            100   105   110

Arg Arg Glu Thr Val Pro Cys Lys Ala Thr Gly Ala Glu Leu Leu Lys
            115   120   125

Thr Met Gly Thr Tyr Leu Leu Tyr Gln His Asp Leu Asp Val Arg His

```
                130                      135                      140
Gly Val Lys Gly Glu His Phe Gly Ala Leu Arg Phe Asp Cys Pro Ala
145                      150                      155                      160
Gly Phe Trp Thr Cys Met Gly Pro Val Ala Pro Leu Phe Trp Pro Val
                    165                      170                      175
Ser Pro Ile Trp Asn Gly Tyr Ile Tyr Pro Met Pro Ile Pro Pro Leu
                    180                      185                      190
Tyr Pro Gly Ser Asn
                195
```

<210> 4870

<211> 218

<212> PRT

<213> Homo sapiens

<400> 4870

```
Met Trp Leu His Arg Gly Pro Leu Arg Pro Pro Gly Val Arg Trp Thr
  1                       5                        10                       15
Pro Trp Ala Phe Leu Glu Ala Cys Ser Trp Gly Pro Ala Leu Ser Leu
                    20                       25                       30
Leu Gly Ser Gly His Ser Leu Pro Gly Thr His Glu Gln Ala Ala Trp
                35                       40                       45
Ser Arg Gly Cys Gly Gln His Gly Gln Ser Pro Thr Gln Lys Cys Lys
            50                       55                       60
Ser Ser Lys Glu Pro Leu Ala Gln Ala Pro Pro His Gln Gly Phe Ala
65                       70                       75                       80
Asp Val Leu Glu Arg Pro Thr Leu Glu Pro Phe Gly Val Leu Ala Pro
                    85                       90                       95
Pro Val Pro Ser Ala Leu Val Glu Ala Ala Ala Thr Ser Pro Pro Gln
                    100                      105                      110
Gly Ala Pro Arg Gly Ile Leu Trp Asp Arg Cys Pro Gln Ile Gln Val
                115                      120                      125
Leu Glu Gly Gln Arg Val Arg Phe Pro Ser Gln Pro Gln His Pro Ser
            130                      135                      140
His Leu Ala Pro Arg Gly Gly Cys Gly Trp Arg Pro Asp Ser Arg Pro
```

```
145                    150                    155                    160
Leu Leu Pro Thr Pro Ser Gly Leu Ser Ser Phe Phe Pro Leu Asp Ala
                    165                    170                    175
Gln Cys Trp Pro Trp Arg Thr Val Ser Trp Arg Met Ala Val Gly Glu
                    180                    185                    190
Ala Val Phe Val Pro Leu Gln His Pro Pro Leu Leu His Gly Ser Pro
                    195                    200                    205
Ile Pro Lys Leu Leu Pro Gly Pro Leu Leu
        210                    215
```

<210> 4871

<211> 349

<212> PRT

<213> Homo sapiens

<400> 4871

```
Met Ala Met Ala Phe Thr Asp Leu Leu Asp Ala Leu Gly Ser Met Gly
 1                   5                    10                   15
Arg Phe Gln Leu Asn His Thr Ala Leu Leu Leu Leu Pro Cys Gly Leu
                    20                   25                   30
Leu Ala Cys His Asn Phe Leu Gln Asn Phe Thr Ala Ala Val Pro Pro
            35                   40                   45
His His Cys Arg Gly Pro Ala Asn His Thr Glu Ala Ser Thr Asn Asp
        50                   55                   60
Ser Gly Ala Trp Leu Arg Ala Thr Ile Pro Leu Asp Gln Leu Gly Ala
65                   70                   75                   80
Pro Glu Pro Cys Arg Arg Phe Thr Lys Pro Gln Trp Ala Leu Leu Ser
                    85                   90                   95
Pro Asn Ser Ser Ile Pro Gly Ala Ala Thr Glu Gly Cys Lys Asp Gly
                    100                  105                  110
Trp Val Tyr Asn Arg Ser Val Phe Pro Ser Thr Ile Val Met Glu Trp
            115                  120                  125
Asp Leu Val Cys Glu Ala Arg Thr Leu Arg Asp Leu Ala Gln Ser Val
        130                  135                  140
Tyr Met Ala Gly Val Leu Val Gly Ala Ala Val Phe Gly Ser Leu Ala
```

```
145                    150                    155                    160
Asp Arg Leu Gly Cys Lys Gly Pro Leu Val Trp Ser Tyr Leu Gln Leu
                     165                    170                    175
Ala Ala Ser Gly Ala Ala Thr Ala Tyr Phe Ser Ser Phe Ser Ala Tyr
                     180                    185                    190
Cys Val Phe Arg Phe Leu Met Gly Met Thr Phe Ser Gly Ile Ile Leu
                     195                    200                    205
Asn Ser Val Ser Leu Val Ala Ser Arg Val Ile Pro Leu Ala Pro Pro
         210                    215                    220
Ala Trp Gln Val Pro Val Ser Cys Thr Glu Ser Ala Glu Gly Gly Cys
225                    230                    235                    240
Asn Glu Arg Glu Glu Gly Gly Arg Gly Lys Ala Asp Gln Gly Gly Asp
                     245                    250                    255
Glu Leu Leu His Pro Lys Arg Val Cys Lys Cys Leu His Leu Gln Leu
                     260                    265                    270
Asn Leu Gly Pro Leu Pro Asn Pro Gly His Pro Gln Gly His Met Leu
                     275                    280                    285
Ser His Gly Asp Leu Arg Gly Arg Gln Arg Ser Ser Gly Ser Gly Glu
         290                    295                    300
Gln Gly Gly Ser Cys Glu Pro Glu Ser Arg Asn Gly Arg Leu Pro Ala
305                    310                    315                    320
Val Ala Pro Ala Gly Leu Gly Leu Pro Phe Val His Leu Pro Leu Ser
                     325                    330                    335
Ala Arg Glu Lys Gln Ile Leu Ser Ser Lys Phe Gln Ser
                     340                    345
```

```
<210> 4872

<211> 421

<212> PRT

<213> Homo sapiens


<400> 4872

Met Arg Tyr Ser Leu Ser Pro Asp Asn His Leu Glu Asp Gly Ile Met
  1             5                    10                    15
Asn Met Ala Asn Phe Leu Arg Gly Phe Glu Glu Lys Gly Ile Lys Asn
```

```
                  20                      25                      30
Asp Arg Pro Glu Asp Gln Leu Ser Lys Glu Lys Lys Lys Ile Leu Phe
            35                      40                      45
Ser Phe Cys Glu Val Cys Asn Ile Gln Leu Asn Ser Ala Ala Gln Ala
        50                      55                      60
Gln Val His Ser Asn Gly Lys Ser His Arg Lys Arg Val Lys Gln Leu
65                      70                      75                      80
Ser Asp Gly Gln Pro Pro Pro Ala Gln Ala Ser Pro Ser Ser Asn
                85                      90                      95
Ser Ser Thr Gly Ser Thr Cys His Thr Thr Thr Leu Pro Ala Leu Val
            100                     105                     110
Arg Thr Pro Thr Leu Met Met Gln Pro Ser Leu Asp Ile Lys Pro Phe
            115                     120                     125
Met Ser Phe Pro Val Asp Ser Ser Ser Ala Val Gly Leu Phe Pro Asn
    130                     135                     140
Phe Asn Thr Met Asp Pro Val Gln Lys Ala Val Ile Asn His Thr Phe
145                     150                     155                     160
Gly Val Ser Ile Pro Pro Lys Lys Lys Gln Val Ile Ser Cys Asn Val
                165                     170                     175
Cys Gln Leu Arg Phe Asn Ser Asp Ser Gln Ala Glu Ala His Tyr Lys
            180                     185                     190
Gly Ser Lys His Ala Lys Lys Val Lys Ala Leu Asp Ala Thr Lys Asn
            195                     200                     205
Lys Pro Lys Met Val Pro Ser Lys Asp Ser Ala Lys Ala Asn Pro Ser
    210                     215                     220
Cys Ser Ile Thr Pro Ile Thr Gly Asn Asn Ser Asp Lys Ser Glu Asp
225                     230                     235                     240
Lys Gly Lys Leu Lys Ala Ser Ser Ser Ser Gln Pro Ser Ser Ser Glu
                245                     250                     255
Ser Gly Ser Phe Leu Leu Lys Ser Gly Thr Thr Pro Leu Pro Pro Gly
            260                     265                     270
Ala Ala Thr Ser Pro Ser Lys Ser Thr Asn Gly Ala Pro Gly Thr Val
            275                     280                     285
Val Glu Ser Glu Glu Glu Lys Ala Lys Lys Leu Leu Tyr Cys Ser Leu
    290                     295                     300
Cys Lys Val Ala Val Asn Ser Leu Ser Gln Leu Glu Ala His Asn Thr
```

```
305                    310                    315                    320
Gly Ser Lys His Lys Thr Met Val Glu Ala Arg Asn Gly Ala Gly Pro
                325                    330                    335
Ile Lys Ser Tyr Pro Arg Pro Gly Ser Arg Leu Lys Met Gln Asn Gly
                340                    345                    350
Ser Lys Gly Ser Gly Leu Gln Asn Lys Thr Phe His Cys Glu Ile Cys
            355                    360                    365
Asp Val His Val Asn Ser Glu Ile Gln Leu Lys Gln His Ile Ser Ser
        370                    375                    380
Arg Arg His Lys Asp Arg Val Ala Gly Lys Pro Leu Lys Pro Lys Tyr
385                    390                    395                    400
Thr Pro Cys Lys Val Ile Gly Leu Leu Pro Lys Pro Leu Pro Pro Ala
                405                    410                    415
Asn Arg Gln Leu Ser
                420
```

```
<210> 4873
<211> 277
<212> PRT
<213> Homo sapiens
```

```
<400> 4873
Met Gly Lys Asn Leu Lys Gly Ile Leu Thr Thr Glu Asn Ile Leu Ser
 1                   5                    10                   15
Ile Asp Asn Ser Val Asn Lys Lys Asp Leu Ser Ile Cys Gly Ser Ser
                20                    25                    30
Gly Glu Glu Phe Phe Asn Asn Cys Glu Val Leu Gln Cys Gly Phe Ser
            35                    40                    45
Val Pro Arg Glu Asn Ile Arg Thr Arg His Lys Ile Cys Pro Cys Asp
        50                    55                    60
Lys Cys Glu Lys Val Phe Pro Ser Ile Ser Lys Leu Lys Arg His Tyr
65                    70                    75                    80
Leu Ile His Thr Gly Gln Arg Pro Phe Gly Cys Asn Ile Cys Gly Lys
                85                    90                    95
Ser Phe Arg Gln Ser Ala His Leu Lys Arg His Glu Gln Thr His Asn
```

```
                    100                      105                      110
Glu Lys Ser Pro Tyr Ala Ser Leu Cys Gln Val Glu Phe Gly Asn Phe
            115                      120                      125
Asn Asn Leu Ser Asn His Ser Gly Asn Asn Val Asn Tyr Asn Ala Ser
        130                      135                      140
Gln Gln Cys Gln Ala Pro Gly Val Gln Lys Tyr Glu Val Ser Glu Ser
145                      150                      155                      160
Asp Gln Met Ser Gly Val Lys Ala Glu Ser Gln Asp Phe Ile Pro Gly
                    165                      170                      175
Ser Thr Gly Gln Pro Cys Leu Pro Asn Val Leu Leu Glu Ser Glu Gln
                    180                      185                      190
Ser Asn Pro Phe Cys Ser Tyr Ser Glu His Gln Glu Lys Asn Asp Val
            195                      200                      205
Phe Leu Tyr Arg Cys Ser Val Cys Ala Lys Ser Phe Arg Ser Pro Ser
        210                      215                      220
Lys Leu Glu Arg His Tyr Leu Ile His Ala Gly Gln Lys Pro Phe Glu
225                      230                      235                      240
Cys Ser Val Cys Gly Lys Thr Phe Arg Gln Ala Pro His Trp Lys Arg
                    245                      250                      255
His Gln Leu Thr His Phe Lys Glu Arg Pro Gln Gly Lys Val Val Ala
                    260                      265                      270
Leu Asp Ser Val Met
                275
```

<210> 4874

<211> 933

<212> PRT

<213> Homo sapiens

<400> 4874

```
Met Ala Trp Lys Thr Leu Pro Ile Tyr Leu Leu Leu Leu Ser Val
 1               5                       10                      15
Phe Val Ile Gln Gln Val Ser Ser Gln Glu Leu Ser Cys Lys Gly Arg
                20                      25                      30
Cys Phe Glu Ser Phe Glu Arg Gly Arg Glu Cys Asp Cys Asp Ala Gln
```

```
                35                      40                      45
Cys Lys Lys Tyr Asp Lys Cys Cys Pro Asp Tyr Glu Ser Phe Cys Ala
         50                      55                      60
Glu Val His Asn Pro Thr Ser Pro Pro Ser Ser Lys Lys Ala Pro Pro
 65                      70                      75                      80
Pro Ser Gly Ala Ser Gln Thr Ile Lys Ser Thr Thr Lys Arg Ser Pro
                 85                      90                      95
Lys Pro Pro Asn Lys Lys Lys Thr Lys Lys Val Ile Glu Ser Glu Glu
                 100                     105                     110
Ile Thr Glu Glu His Ser Val Ser Glu Asn Gln Glu Ser Ser Ser Ser
         115                     120                     125
Ser Ser Ser Ser Ser Ser Ser Ser Thr Ile Arg Lys Ile Lys Ser Ser
         130                     135                     140
Lys Asn Ser Ala Ala Asn Arg Glu Leu Gln Lys Lys Leu Lys Val Lys
145                     150                     155                     160
Asp Asn Lys Lys Asn Arg Thr Lys Lys Lys Pro Thr Pro Lys Pro Pro
                 165                     170                     175
Val Val Asp Glu Ala Gly Ser Gly Leu Asp Asn Gly Asp Phe Lys Val
                 180                     185                     190
Thr Thr Pro Asp Thr Ser Thr Thr Gln His Asn Lys Val Ser Thr Ser
         195                     200                     205
Pro Lys Ile Thr Thr Ala Lys Pro Ile Asn Pro Arg Pro Ser Leu Pro
         210                     215                     220
Pro Asn Ser Asp Thr Ser Lys Glu Thr Ser Leu Thr Val Asn Lys Glu
225                     230                     235                     240
Thr Thr Val Glu Thr Lys Glu Thr Thr Thr Asn Lys Gln Thr Ser
                 245                     250                     255
Thr Asp Gly Lys Glu Lys Thr Thr Ser Ala Lys Glu Thr Gln Ser Ile
                 260                     265                     270
Glu Lys Thr Ser Ala Lys Asp Leu Ala Pro Thr Ser Lys Val Leu Ala
         275                     280                     285
Lys Pro Thr Pro Lys Ala Glu Thr Thr Thr Lys Gly Pro Ala Leu Thr
         290                     295                     300
Thr Pro Lys Glu Pro Thr Pro Thr Thr Pro Lys Glu Pro Ala Ser Thr
305                     310                     315                     320
Thr Pro Lys Glu Pro Thr Pro Thr Thr Ile Lys Ser Ala Pro Thr Thr
```

```
                  325                    330                    335
Pro Lys Glu Pro Ala Pro Thr Thr Thr Lys Ser Ala Pro Thr Thr Pro
                  340                    345                    350
Lys Glu Pro Ala Pro Thr Thr Thr Lys Glu Pro Ala Pro Thr Thr Pro


                  355                    360                    365
Lys Glu Pro Ala Pro Thr Thr Pro Glu Thr Pro Pro Pro Thr Thr Ser
                  370                    375                    380
Glu Val Ser Thr Pro Thr Thr Thr Lys Glu Pro Thr Thr Ile His Lys
385                    390                    395                    400
Ser Pro Asp Glu Ser Thr Pro Glu Leu Ser Ala Glu Pro Thr Pro Lys
                  405                    410                    415
Ala Leu Glu Asn Ser Pro Lys Glu Pro Gly Val Pro Thr Thr Lys Thr
                  420                    425                    430
Pro Ala Ala Thr Lys Pro Glu Met Thr Thr Thr Ala Lys Asp Lys Thr
                  435                    440                    445
Thr Glu Arg Asp Leu Arg Thr Thr Pro Glu Thr Thr Thr Ala Ala Pro
                  450                    455                    460
Lys Met Thr Lys Glu Thr Ala Thr Thr Thr Glu Lys Thr Thr Glu Ser
465                    470                    475                    480
Lys Ile Thr Ala Thr Thr Thr Gln Val Thr Ser Thr Thr Thr Gln Asp
                  485                    490                    495
Thr Thr Pro Phe Lys Ile Thr Thr Leu Lys Thr Thr Thr Leu Ala Pro
                  500                    505                    510
Lys Val Thr Thr Thr Lys Lys Thr Ile Thr Thr Thr Glu Ile Met Asn
                  515                    520                    525
Lys Pro Glu Glu Thr Ala Lys Pro Lys Asp Arg Ala Thr Asn Ser Lys
                  530                    535                    540
Ala Thr Thr Pro Lys Pro Gln Lys Pro Thr Lys Ala Pro Lys Lys Pro
545                    550                    555                    560
Thr Ser Thr Lys Lys Pro Lys Thr Met Pro Arg Val Arg Lys Pro Lys
                  565                    570                    575
Thr Thr Pro Thr Pro Arg Lys Met Thr Ser Thr Met Pro Glu Leu Asn
                  580                    585                    590
Pro Thr Ser Arg Ile Ala Glu Ala Met Leu Gln Thr Thr Thr Arg Pro
                  595                    600                    605
```

Asn Gln Thr Pro Asn Ser Lys Leu Val Glu Val Asn Pro Lys Ser Glu
     610   615   620

Asp Ala Gly Gly Ala Glu Gly Glu Thr Pro His Met Leu Leu Arg Pro
625   630   635   640

His Val Phe Met Pro Glu Val Thr Pro Asp Met Asp Tyr Leu Pro Arg
          645   650   655

Val Pro Asn Gln Gly Ile Ile Ile Asn Pro Met Leu Ser Asp Glu Thr
          660   665   670

Asn Ile Cys Asn Gly Lys Pro Val Asp Gly Leu Thr Thr Leu Arg Asn
     675   680   685

Gly Thr Leu Val Ala Phe Arg Gly His Tyr Phe Trp Met Leu Ser Pro
     690   695   700

Phe Ser Pro Pro Ser Pro Ala Arg Arg Ile Thr Glu Val Trp Gly Ile
705   710   715   720

Pro Ser Pro Ile Asp Thr Val Phe Thr Arg Cys Asn Cys Glu Gly Lys
          725   730   735

Thr Phe Phe Phe Lys Asp Ser Gln Tyr Trp Arg Phe Thr Asn Asp Ile
          740   745   750

Lys Asp Ala Gly Tyr Pro Lys Pro Ile Phe Lys Gly Phe Gly Gly Leu
          755   760   765

Thr Gly Gln Ile Val Ala Ala Leu Ser Thr Ala Lys Tyr Lys Asn Trp
     770   775   780

Pro Glu Ser Val Tyr Phe Phe Lys Arg Gly Gly Ser Ile Gln Gln Tyr
785   790   795   800

Ile Tyr Lys Gln Glu Pro Val Gln Lys Cys Pro Gly Arg Arg Pro Ala
          805   810   815

Leu Asn Tyr Pro Val Tyr Gly Glu Thr Thr Gln Val Arg Arg Arg Arg
          820   825   830

Phe Glu Arg Ala Ile Gly Pro Ser Gln Thr His Thr Ile Arg Ile Gln
          835   840   845

Tyr Ser Pro Ala Arg Leu Ala Tyr Gln Asp Lys Gly Val Leu His Asn
     850   855   860

Glu Val Lys Val Ser Ile Leu Trp Arg Gly Leu Pro Asn Val Val Thr
865   870   875   880

Ser Ala Ile Ser Leu Pro Asn Ile Arg Lys Pro Asp Gly Tyr Asp Tyr
          885   890   895

Tyr Ala Phe Ser Lys Asp Gln Tyr Tyr Asn Ile Asp Val Pro Ser Arg
          900   905   910
Thr Ala Arg Ala Ile Thr Thr Arg Ser Gly Gln Thr Leu Ser Lys Val
          915   920   925
Trp Tyr Asn Cys Pro
    930

<210> 4875
<211> 216
<212> PRT
<213> Homo sapiens

<400> 4875
Met Arg Trp Trp His Arg Cys Gly Gln Pro Gly Thr Asp Val Val Leu
    1   5   10   15
Thr Gly Lys Asn Leu Pro Arg Pro Thr Leu Ser Thr Pro Ala Glu Ser
              20   25   30
Ser Gln Pro Gly Gln Gly Ala His Val Gly Pro Asn Ala His Ala Pro
          35   40   45
His Ser Cys Gly Glu Leu Thr Ala Arg Pro Arg Gly Ala Arg Gly Ala
        50   55   60
Gln Arg Pro Arg Ser Pro Leu Leu Arg Arg Ala His Ser Gln Ala Arg
65   70   75   80
Gly Arg Thr Trp Gly Pro Thr Pro Thr Leu Pro Thr Pro Ala Glu Ser
                85   90   95
Ser Gln Pro Gly Gln Gly Ala His Val Gly Pro Asn Ala His Ala Pro
          100   105   110
His Ser Cys Gly Glu Leu Thr Ala Arg Pro Gly Gly Ala Arg Gly Ala
          115   120   125
Gln Arg Pro His Ser Pro Leu Leu Arg Arg Ala His Ser Gln Ala Arg
          130   135   140
Gly Arg Thr Trp Gly Pro Thr Phe Arg Asn Lys Ile Ile Val Tyr Ser
145   150   155   160
Phe Leu Phe Phe Leu Lys Ser Val Phe Leu Leu Arg Thr Pro Asp Val
              165   170   175

Cys Gly Ser Glu Ala Gln Trp Ala Tyr Ser Tyr Leu Thr Trp Gln Thr
            180   185   190

Trp Lys Trp Lys Leu Leu Cys Ile Thr Arg Ile Ser Arg Ala Ser Ala
            195   200   205

Ser Cys Trp Pro Asp Arg Val Pro
        210   215

<210> 4876

<211> 904

<212> PRT

<213> Homo sapiens

<400> 4876

Met Ala Glu Ala Leu Leu Ala Cys Cys Pro Gly Asp Gln Lys Pro Gly
 1   5   10   15

Ile Leu Ala Arg Leu Lys Asp Ile Lys Ala Gln Trp Glu Glu Thr Val
            20   25   30

Thr Tyr Met Thr His Cys His Ser Arg Ile Glu Trp Val Trp Leu His
            35   40   45

Trp Ser Glu Tyr Leu Leu Ala Arg Asp Glu Phe Tyr Arg Trp Phe Gln
        50   55   60

Lys Met Met Val Thr Leu Glu Pro His Ile Glu Leu Gln Leu Gly Leu
65   70   75   80

Lys Glu Lys Gln Trp Gln Leu Ser His Ala Gln Val Leu Leu His Asn
                85   90   95

Val Asp Asn Gln Ala Val Leu Leu Asp Arg Leu Leu Glu Glu Ala Ala
            100   105   110

Ser Leu Phe Asn Arg Ile Gly Asp Pro Ser Val Asp Glu Asp Ala Gln
            115   120   125

Lys Arg Met Lys Ala Glu Tyr Asp Ala Val Lys Ala Lys Ala Gln Lys
            130   135   140

Arg Val Asp Leu Leu Glu Gln Val Ala Arg Glu His Glu Glu Tyr Gln
145   150   155   160

Ala Gly Val Asp Glu Phe Gln Leu Trp Leu Lys Ala Val Val Glu Lys
                165   170   175

Val Asn Gly Cys Leu Gly Arg Asn Cys Lys Leu Pro Ile Thr Gln Arg
               180   185   190

Leu Ser Thr Leu Gln Asp Ile Ala Lys Asp Phe Pro Arg Gly Glu Glu
               195   200   205

Ser Leu Glu Thr Leu Glu Glu Gln Ser Ala Gly Val Ile Arg Asn Thr
     210   215   220

Ser Pro Leu Gly Ala Glu Lys Ile Thr Gly Glu Leu Glu Glu Met Arg
225   230   235   240

Lys Val Leu Glu Lys Leu Arg Ala Leu Trp Glu Glu Glu Glu Glu Arg
               245   250   255

Leu Arg Gly Leu Leu Arg Ser Arg Gly Ala Trp Glu Gln Gln Ile Lys
             260   265   270

Gln Leu Glu Ala Glu Leu Ser Glu Phe Arg Met Val Leu Gln Arg Leu
             275   280   285

Ala Gln Glu Gly Leu Gln Pro Ala Ala Lys Ala Gly Thr Glu Asp Glu
         290   295   300

Leu Val Ala His Trp Arg Arg Tyr Ser Ala Thr Arg Ala Ala Leu Ala
305   310   315   320

Ser Glu Glu Pro Arg Val Asp Arg Leu Gln Ala Gln Leu Lys Glu Leu
             325   330   335

Ile Val Phe Pro His Asn Leu Lys Pro Leu Ser Asp Ser Val Ile Ala
             340   345   350

Thr Ile Gln Glu Tyr Gln Ser Leu Lys Val Lys Ser Ala Arg Leu Arg
             355   360   365

Asn Ala Ala Ala Val Glu Leu Trp Gln His Phe Gln Arg Pro Leu Gln
         370   375   380

Asp Leu Gln Leu Trp Lys Ala Leu Ala Gln Arg Leu Leu Glu Val Thr
385   390   395   400

Ala Ser Leu Pro Asp Leu Pro Ser Leu His Thr Phe Leu Pro Gln Ile
             405   410   415

Glu Ala Ala Leu Met Glu Ser Ser Arg Leu Lys Glu Leu Leu Thr Met
             420   425   430

Leu Gln Leu Lys Lys Asp Leu Leu Ile Gly Ile Phe Gly Gln Glu Arg
             435   440   445

Ala Thr Ala Leu Leu Glu Gln Val Ala Gly Ser Met Arg Asp Arg Asp
     450   455   460

Leu Leu His Asn Ser Leu Leu Gln Arg Lys Ser Lys Leu Gln Ser Leu
465   470   475   480

Leu Ala Gln His Lys Asp Phe Gly Ala Ala Phe Glu Pro Leu Gln Arg
                485   490   495

Lys Leu Leu Asp Leu Gln Val Arg Val Gln Ala Glu Lys Gly Leu Gln
                500   505   510

Arg Asp Leu Pro Gly Lys Gln Ala Gln Leu Ser Arg Leu Gln Gly Leu
            515   520   525

Gln Glu Glu Gly Leu Asp Leu Gly Ala Gln Met Glu Ala Ala Arg Pro
        530   535   540

Leu Val Gln Glu Asn Pro Asn His Gln His Lys Met Asp Gln Leu Ser
545   550   555   560

Ser Asp Phe Gln Ala Leu Gln Arg Ser Leu Glu Asp Leu Val Asp Arg
                565   570   575

Cys Arg Gln Ser Val Gln Glu His Cys Thr Phe Ser His Gln Leu Leu
                580   585   590

Glu Leu Arg Gln Trp Ile Val Val Thr Met Gln Lys Leu Glu Ala His
            595   600   605

Arg Gly Glu Ala Gly Pro Gly Asp Ala Glu Ser Gln Glu Ala Glu Phe
        610   615   620

Glu Arg Leu Val Ala Glu Phe Pro Glu Lys Glu Ala Gln Leu Ser Leu
625   630   635   640

Val Glu Ala Gln Gly Trp Leu Val Met Glu Lys Ser Ser Pro Glu Gly
                645   650   655

Ala Ala Val Val Gln Glu Glu Leu Arg Glu Leu Ala Glu Ser Trp Arg
                660   665   670

Ala Leu Arg Leu Leu Glu Glu Ser Leu Leu Ser Leu Ile Arg Asn Trp
            675   680   685

His Leu Gln Arg Met Glu Val Asp Ser Gly Lys Lys Met Val Phe Thr
        690   695   700

Asn Asn Ile Pro Lys Ser Gly Phe Leu Ile Asn Pro Met Asp Pro Ile
705   710   715   720

Pro Arg His Arg Arg Arg Glu Glu Glu Gly Ser His Glu Asp Phe Ser
                725   730   735

Gln Leu Leu Arg Asn Phe Gly Gln Trp Leu Gln Val Glu Asn Ser Lys
            740   745   750

Leu Val Arg Ile Ile Ala Met Arg Thr Ser Thr Ala Glu Asp Leu Arg
     755   760   765

Thr Arg Lys Ser Lys Leu Gln Glu Leu Glu Ala Arg Val Pro Glu Gly
     770   775   780

Gln His Leu Phe Glu Asn Leu Leu Arg Leu Gly Pro Ala Arg Gly Thr
785   790   795   800

Ser Asp Glu Leu Glu Asp Leu Arg Tyr Gln Trp Met Leu Tyr Lys Ser
         805   810   815

Lys Leu Lys Asp Ser Gly His Leu Leu Thr Gln Ser Ser Pro Gly Glu
         820   825   830

Pro Thr Gly Phe Gln Lys Thr Arg Arg Trp Arg Gly Leu Gly Ser Leu
         835   840   845

Phe Arg Arg Ala Cys Cys Val Ala Leu Pro Leu Gln Leu Leu Leu Leu
     850   855   860

Leu Phe Leu Leu Leu Leu Phe Leu Leu Pro Ile Arg Glu Glu Asp Arg
865   870   875   880

Ser Cys Thr Leu Ala Asn Asn Phe Ala Arg Ser Phe Thr Leu Met Leu
         885   890   895

Arg Tyr Asn Gly Pro Pro Pro Thr
         900

<210> 4877

<211> 164

<212> PRT

<213> Homo sapiens

<400> 4877

Met Ser Glu Pro Ser Pro Cys Pro Pro Glu Gly Val Gln Leu Cys Gly
1   5   10   15

Pro Ala Leu Tyr Arg Leu Val Pro Cys Val Cys Ala Val Ser Val Cys
         20   25   30

Leu Leu Pro Gln Val Leu Lys Lys Tyr Pro Arg Leu Trp Cys Met Thr
         35   40   45

Lys Pro Pro Ser Arg Arg Pro Lys Leu Tyr Ile Val Asn Leu Gln Trp
     50   55   60

Thr Pro Lys Asp Asp Trp Ala Ala Leu Lys Leu His Gly Lys Cys Asp
65   70   75   80

Asp Val Met Arg Leu Leu Met Ala Glu Leu Gly Leu Glu Ile Pro Ala
                85   90   95

Tyr Ser Arg Trp Gln Asp Pro Ile Phe Ser Leu Ala Thr Pro Leu Arg
                100   105   110

Ala Gly Glu Glu Gly Ser His Ser Arg Lys Ser Leu Cys Arg Ser Arg
                115   120   125

Glu Glu Ala Pro Pro Gly Asp Arg Gly Ala Pro Leu Ser Ser Ala Pro
    130   135   140

Ile Leu Gly Gly Trp Phe Gly Arg Gly Cys Thr Lys Arg Thr Lys Arg
145   150   155   160

Lys Lys Val Thr

<210> 4878

<211> 477

<212> PRT

<213> Homo sapiens

<400> 4878

Met Lys Leu Ile Arg Ser Ser Ser Cys His Val Gly Ser Ala Arg Lys
1   5   10   15

Leu His His Trp Arg Ala Gly Gln Thr Glu Pro Gly Trp Ala Gly Thr
                20   25   30

Arg His Asp Ser Pro Val Pro Leu Pro Pro Arg Gly Gly Leu Ala Ala
                35   40   45

Asp Asn Val Leu Leu Ser Ser Asp Gly Ser His Ala Ala Leu Cys Asp
    50   55   60

Phe Gly His Ala Val Cys Leu Gln Pro Asp Gly Leu Gly Lys Ser Leu
65   70   75   80

Leu Thr Gly Asp Tyr Ile Pro Gly Thr Glu Thr His Met Ala Pro Glu
                85   90   95

Val Val Leu Gly Arg Ser Cys Asp Ala Lys Val Asp Val Trp Ser Ser
                100   105   110

Cys Cys Met Met Leu His Met Leu Asn Gly Cys His Pro Trp Thr Gln
         115   120   125

Phe Phe Arg Gly Pro Leu Cys Leu Lys Ile Ala Ser Glu Pro Pro Pro
         130   135   140

Val Arg Glu Ile Pro Pro Ser Cys Ala Pro Leu Thr Ala Gln Ala Ile
145   150   155   160

Gln Glu Gly Leu Arg Lys Glu Pro Ile His Arg Val Ser Ala Ala Glu
         165   170   175

Leu Gly Gly Lys Val Asn Arg Ala Leu Gln Gln Val Gly Gly Leu Lys
         180   185   190

Ser Pro Trp Arg Gly Glu Tyr Lys Glu Pro Arg His Pro Pro Pro Asn
         195   200   205

Gln Ala Asn Tyr His Gln Thr Leu His Ala Gln Pro Arg Glu Leu Ser
         210   215   220

Pro Arg Ala Pro Gly Pro Arg Pro Ala Glu Glu Thr Thr Gly Arg Ala
225   230   235   240

Pro Lys Leu Gln Pro Pro Leu Pro Pro Glu Pro Pro Glu Pro Asn Lys
         245   250   255

Ser Pro Pro Leu Thr Leu Ser Lys Glu Glu Ser Gly Met Trp Glu Pro
         260   265   270

Leu Pro Leu Ser Ser Leu Glu Pro Ala Pro Ala Arg Asn Pro Ser Ser
         275   280   ,   285

Pro Glu Arg Lys Ala Thr Val Pro Glu Gln Glu Leu Gln Gln Leu Glu
         290   295   300

Ile Glu Leu Phe Leu Asn Ser Leu Ser Gln Pro Phe Ser Leu Glu Glu
305   310   315   320

Gln Glu Gln Ile Leu Ser Cys Leu Ser Ile Asp Ser Leu Ser Leu Ser
         325   330   335

Asp Asp Ser Glu Lys Asn Pro Ser Lys Ala Ser Gln Ser Ser Arg Asp

         340   345   350

Thr Leu Ser Ser Gly Val His Ser Trp Ser Ser Gln Ala Glu Ala Arg
         355   360   365

Ser Ser Ser Trp Asn Met Val Leu Ala Arg Gly Arg Pro Thr Asp Thr
         370   375   380

Pro Ser Tyr Phe Asn Gly Val Lys Val Gln Ile Gln Ser Leu Asn Gly

385   390   395   400
Glu His Leu His Ile Arg Glu Phe His Arg Val Lys Val Gly Asp Ile
                        405   410   415
Ala Thr Gly Ile Ser Ser Gln Ile Pro Ala Ala Ala Phe Ser Leu Val
                        420   425   430
Thr Lys Asp Gly Gln Pro Val Arg Tyr Asp Met Glu Val Pro Asp Ser
                435   440   445
Gly Ile Asp Leu Gln Cys Thr Leu Ala Pro Asp Gly Ser Phe Ala Trp
            450   455   460
Ser Trp Arg Val Lys His Gly Gln Leu Glu Asn Arg Pro
465   470   475

<210> 4879

<211> 486

<212> PRT

<213> Homo sapiens

<400> 4879
Met Gly Ser Glu Lys Asp Ser Glu Ser Pro Arg Ser Thr Ser Leu His
    1   5   10   15
Ala Ala Ala Pro Asp Pro Lys Cys Arg Ser Gly Gly Arg Arg Arg Arg
                20   25   30
Leu Leu Ser Cys Pro His Arg Ser Cys Arg Asp Cys Leu Arg His Tyr
            35   40   45
Leu Arg Leu Glu Ile Ser Glu Ser Arg Val Pro Ile Ser Cys Pro Glu
        50   55   60
Cys Ser Glu Arg Leu Asn Pro His Asp Ile Arg Leu Leu Leu Ala Asp
65   70   75   80
Pro Pro Leu Met His Lys Tyr Glu Glu Phe Met Leu Arg Arg Tyr Leu
                85   90   95
Ala Ser Asp Pro Asp Cys Arg Trp Cys Pro Ala Pro Asp Cys Gly Tyr
                100   105   110
Ala Val Ile Ala Tyr Gly Cys Ala Ser Cys Pro Lys Leu Thr Cys Glu
            115   120   125
Arg Glu Gly Cys Gln Thr Glu Phe Cys Tyr His Cys Lys Gln Ile Trp

```
            130                     135                     140
His Pro Asn Gln Thr Cys Asp Met Ala Arg Gln Gln Arg Ala Gln Thr
145                     150                     155                     160
Leu Arg Val Arg Thr Lys His Thr Ser Gly Leu Ser Tyr Gly Gln Glu
                        165                     170                     175
Ser Gly Pro Asp Asp Ile Lys Pro Cys Pro Arg Cys Ser Ala Tyr Ile
                        180                     185                     190
Ile Lys Met Asn Asp Gly Ser Cys Asn His Met Thr Cys Ala Val Cys
                        195                     200                     205
Gly Cys Glu Phe Cys Trp Leu Cys Met Lys Glu Ile Ser Asp Leu His
            210                     215                     220
Tyr Leu Ser Pro Ser Gly Cys Thr Phe Trp Gly Lys Lys Pro Trp Ser
225                     230                     235                     240
Arg Lys Lys Lys Ile Leu Trp Gln Leu Gly Thr Leu Ile Gly Ala Pro
                        245                     250                     255
Val Gly Ile Ser Leu Ile Ala Gly Ile Ala Ile Pro Ala Met Val Ile
                        260                     265                     270
Gly Ile Pro Val Tyr Val Gly Arg Lys Ile His Ser Arg Tyr Glu Gly
            275                     280                     285
Arg Lys Thr Ser Lys His Lys Arg Asn Leu Ala Ile Thr Gly Gly Val
            290                     295                     300
Thr Leu Ser Val Ile Ala Ser Pro Val Ile Ala Ala Val Ser Val Gly
305                     310                     315                     320
Ile Gly Val Pro Ile Met Leu Ala Tyr Val Tyr Gly Val Val Pro Ile
                        325                     330                     335
Ser Leu Cys Arg Gly Gly Gly Cys Gly Val Ser Thr Ala Asn Gly Lys
            340                     345                     350
Gly Val Lys Ile Glu Phe Asp Glu Asp Asp Gly Pro Ile Thr Val Ala
            355                     360                     365
Asp Ala Trp Arg Ala Leu Lys Asn Pro Ser Ile Gly Glu Ser Ser Ile
            370                     375                     380
Glu Gly Leu Thr Ser Val Leu Ser Thr Ser Gly Ser Pro Thr Asp Gly
385                     390                     395                     400
Leu Ser Val Met Gln Gly Pro Tyr Ser Glu Thr Ala Ser Phe Ala Ala
                        405                     410                     415
Leu Ser Gly Gly Thr Leu Ser Gly Gly Ile Leu Ser Ser Gly Lys Gly
```

```
             420                    425                    430
Lys Tyr Ser Arg Leu Glu Val Gln Ala Asp Val Gln Lys Glu Ile Phe
             435                    440                    445
Pro Lys Asp Thr Ala Ser Leu Gly Ala Ile Ser Asp Asn Ala Ser Thr
         450                    455                    460
Arg Ala Met Ala Gly Ser Ile Ile Ser Ser Tyr Asn Pro Gln Asp Arg
465                    470                    475                    480
Phe Ser Met Ile His Ala
                     485
```

```
<210> 4880
<211> 492
<212> PRT
<213> Homo sapiens
```

```
<400> 4880
Met Ala Met Ala Leu Pro Met Pro Gly Pro Gln Glu Ala Val Val Phe
 1               5                   10                  15
Glu Asp Val Ala Val Tyr Phe Thr Arg Ile Glu Trp Ser Cys Leu Ala
                 20                  25                  30
Pro Asp Gln Gln Ala Leu Tyr Arg Asp Val Met Leu Glu Asn Tyr Gly
             35                  40                  45
Asn Leu Ala Ser Leu Gly Phe Leu Val Ala Lys Pro Ala Leu Ile Ser
         50                  55                  60
Leu Leu Glu Gln Gly Glu Glu Pro Gly Ala Leu Ile Leu Gln Val Ala
65                  70                  75                  80
Glu Gln Ser Val Ala Lys Ala Ser Leu Cys Thr Asp Ser Arg Met Glu
                 85                  90                  95
Ala Gly Ile Met Glu Ser Pro Leu Gln Arg Lys Leu Ser Arg Gln Ala
                 100                 105                 110
Gly Leu Pro Gly Thr Val Trp Gly Cys Leu Pro Trp Gly His Pro Val
             115                 120                 125
Gly Gly His Pro Ala Pro Pro His Pro His Gly Gly Pro Glu Asp Gly
         130                 135                 140
Ser Asp Lys Pro Thr His Pro Arg Ala Arg Glu His Ser Ala Ser Pro
```

```
145                    150                    155                    160
Arg Val Leu Gln Glu Asp Leu Gly Arg Pro Val Gly Ser Ser Ala Pro
                    165                    170                    175
Arg Tyr Arg Cys Val Cys Gly Lys Ala Phe Arg Tyr Asn Ser Leu Leu
                    180                    185                    190
Leu Arg His Gln Ile Val His Thr Gly Ala Lys Pro Phe Gln Cys Thr
                    195                    200                    205
Glu Cys Gly Lys Ala Phe Lys Gln Ser Ser Ile Leu Leu Arg His Gln
         210                    215                    220
Leu Ile His Thr Glu Glu Lys Pro Phe Gln Cys Gly Glu Cys Gly Lys
225                    230                    235                    240
Ala Phe Arg Gln Ser Thr Gln Leu Ala Ala His His Arg Val His Thr
                    245                    250                    255
Arg Glu Arg Pro Tyr Ala Cys Gly Glu Cys Gly Lys Ala Phe Ser Arg
                    260                    265                    270
Ser Ser Arg Leu Leu Gln His Gln Lys Phe His Thr Gly Glu Lys Pro
                    275                    280                    285
Phe Ala Cys Thr Glu Cys Gly Lys Ala Phe Cys Arg Arg Phe Thr Leu
         290                    295                    300
Asn Glu His Gly Arg Ile His Ser Gly Glu Arg Pro Tyr Arg Cys Leu
305                    310                    315                    320
Arg Cys Gly Gln Arg Phe Ile Arg Gly Ser Ser Leu Leu Lys His His
                    325                    330                    335
Arg Leu His Ala Gln Glu Gly Ala Gln Asp Gly Gly Ala Gly Gln Gly
                    340                    345                    350
Ala Leu Leu Gly Ala Ala Gln Arg Pro Gln Ala Gly Asp Pro Pro His
         355                    360                    365
Glu Cys Pro Val Cys Gly Arg Pro Phe Arg His Asn Ser Leu Leu Leu
         370                    375                    380
Leu His Leu Arg Leu His Thr Gly Glu Lys Pro Phe Glu Cys Ala Glu
385                    390                    395                    400
Cys Gly Lys Ala Phe Gly Arg Lys Ser Asn Leu Thr Leu His Gln Lys
                    405                    410                    415
Ile His Thr Lys Glu Lys Pro Phe Ala Cys Thr Glu Cys Gly Lys Ala
                    420                    425                    430
Phe Arg Arg Ser Tyr Thr Leu Asn Glu His Tyr Arg Leu His Ser Gly
```

```
                435                    440                     445
Glu Arg Pro Tyr Arg Cys Arg Ala Cys Gly Arg Ala Cys Ser Arg Leu
        450                    455                     460
Ser Thr Leu Ile Gln His Gln Lys Val His Gly Arg Glu Pro Gly Glu
465                    470                     475                     480
Asp Thr Glu Gly Arg Arg Ala Pro Cys Trp Ala Ser
                485                    490
```

<210> 4881

<211> 232

<212> PRT

<213> Homo sapiens

<400> 4881

```
Met Ile Arg Lys Val Lys Val Glu Asp Glu Asp Gln Glu Ala Glu Glu
 1               5                   10                  15
Glu Val Glu Trp Pro Gln His Leu Ser Leu Leu Pro Ser Pro Phe Pro
            20                  25                  30
Ala Pro Asp Leu Gly His Leu Ala Ala Ala Tyr Lys Leu Glu Pro Gly
            35                  40                  45
Ala Pro Gly Ala Leu Ser Gly Leu Ala Leu Ser Gly Trp Gly Pro Met
        50                  55                  60
Pro Glu Lys Pro Tyr Gly Cys Gly Glu Cys Glu Arg Arg Phe Arg Asp
65                  70                  75                  80
Gln Leu Thr Leu Arg Leu His Gln Arg Leu His Arg Gly Glu Gly Pro
                85                  90                  95
Cys Ala Cys Pro Ser Leu Val Arg Ser Pro Arg Gly Gly Ala Ala Pro
            100                 105                 110
Ala Leu Leu Leu Ser Leu Val Leu Thr Arg Thr Leu Ser Cys Pro Gln
        115                 120                 125
Phe Arg Glu Ala Arg Ala Met Arg Pro Pro Gly Val Ser Lys Ala Thr
        130                 135                 140
Trp Ala Ala Ala Arg Arg Phe Gly Arg Arg Gly Thr Pro Val Ser Phe
145                 150                 155                 160
Pro Gln Cys Leu Arg Pro His Ser Ile Pro Ser Ser Asp Leu Leu Gly
```

```
                 165                  170                  175
Gln Arg Leu Ser Glu Pro Leu Leu Gly Thr Ala Glu Leu Lys Phe Leu
                 180                  185                  190
Glu Gly Ser His Pro Gly Ala Pro Leu Glu Ser Arg Tyr Phe Pro Asp
                 195                  200                  205
Pro Ala Arg Pro Gln Pro Gly Gln Glu Arg Val Val Ile Tyr Val Leu
             210              215                  220
Lys Val Ser Leu Lys Leu Lys Ser
225                  230
```

<210> 4882

<211> 158

<212> PRT

<213> Homo sapiens

<400> 4882

```
Met Gly Arg Ser Pro Arg Lys Ile Asp Gln Phe Cys Asn Ser Ser Asn
 1               5                   10                  15
Met Val His Gly Ser Val Thr Phe Arg Asp Val Ala Ile Asp Phe Ser
                 20                  25                  30
Gln Glu Glu Trp Glu Cys Leu Gln Pro Asp Gln Arg Thr Leu Tyr Arg
             35                  40                  45
Asp Val Met Leu Glu Asn Tyr Ser His Leu Ile Ser Leu Gly Ser Ser
         50                  55                  60
Ile Ser Lys Pro Asp Val Ile Thr Leu Leu Glu Gln Glu Lys Glu Pro
65                  70                  75                  80
Trp Met Val Val Arg Lys Glu Thr Ser Arg Arg Tyr Pro Asp Leu Glu
                 85                  90                  95
Leu Lys Tyr Gly Pro Glu Lys Val Ser Pro Glu Asn Asp Thr Ser Glu
                 100                 105                 110
Val Asn Leu Pro Lys Gln Ile Ser Ser Leu Ala Ser Lys Pro Ser Phe
             115                 120                 125
Thr Ala Ile His Ile Gln Arg Arg Ile His Cys Arg Ile Cys Ile Ala
             130                 135                 140
Phe Gly Tyr Leu Ser Leu Val Tyr Cys Ser Leu Glu Ile Leu
```

145   150   155

<210> 4883
<211> 296
<212> PRT
<213> Homo sapiens

<400> 4883

Met Ala Gln Arg Val Lys Phe Pro Thr Asp Thr Leu Gln Glu Leu Leu
 1   5   10   15

Asp Val His Ala Ala Cys Glu Arg Glu Ala Ile Ala Ile Phe Met Glu
              20   25   30

His Ser Phe Lys Asp Glu Asn Gln Glu Phe Gln Lys Lys Phe Met Glu
          35   40   45

Thr Thr Met Asn Lys Lys Gly Asp Phe Leu Leu Gln Asn Glu Glu Ser
       50   55   60

Ser Val Gln Tyr Cys Gln Ala Lys Leu Asn Glu Leu Ser Lys Gly Leu
65   70   75   80

Met Glu Ser Ile Ser Ala Gly Ser Phe Ser Val Pro Gly Gly His Lys
                 85   90   95

Leu Tyr Met Glu Thr Lys Glu Arg Ile Glu Gln Asp Tyr Trp Gln Val
            100   105   110

Pro Arg Lys Gly Val Lys Ala Lys Glu Val Phe Gln Arg Phe Leu Glu
         115   120   125

Ser Gln Met Val Ile Glu Glu Ser Ile Leu Gln Ser Asp Lys Ala Leu
         130   135   140

Thr Asp Arg Glu Lys Ala Val Ala Val Asp Arg Ala Lys Lys Glu Ala
145   150   155   160

Ala Glu Lys Glu Gln Glu Leu Leu Lys Gln Lys Leu Gln Glu Gln Gln
                 165   170   .   175

Gln Gln Met Glu Ala Gln Val Lys Ser Arg Lys Glu Asn Ile Ala Gln
            180   185   190

Leu Lys Glu Lys Leu Gln Met Glu Arg Glu His Leu Leu Arg Glu Gln
         195   200   205

Ile Met Met Leu Glu His Thr Gln Lys Val Gln Asn Asp Trp Leu His

```
          210                      215                      220
Glu Gly Phe Lys Lys Lys Tyr Glu Glu Met Asn Ala Glu Ile Ser Gln
225                      230                      235                      240
Phe Lys Arg Met Ile Asp Thr Thr Lys Asn Asp Asp Thr Pro Trp Ile
                    245                      250                      255
Ala Arg Thr Leu Asp Asn Leu Ala Asp Glu Leu Thr Ala Ile Leu Ser
                    260                      265                      270
Ala Pro Ala Lys Leu Ile Gly His Gly Val Lys Gly Val Ser Ser Leu
                    275                      280                      285
Phe Lys Lys His Lys Leu Pro Phe
                    290                      295
```

<210> 4884
<211> 153
<212> PRT
<213> Homo sapiens

<400> 4884
```
Met Pro Arg Leu Pro Ala His Arg His Ile Pro Ser Phe Asn Pro Arg
  1                 5                      10                      15
Gly Trp Glu Pro Asn Lys Leu Trp Gln Thr Asp Val Thr His Ile Pro
                   20                      25                      30
Glu Phe Gly Lys Leu Arg Tyr Val His Val Ser Ile Asp Leu Ile Ser
                   35                      40                      45
Ala Asn Ala Leu Pro Gly Glu Ser Thr Gly Tyr Val Thr Lys His Leu
              50                      55                      60
Leu Leu Thr Phe Ala Phe Met Gly Gln Pro Thr Lys Ile Lys Thr Asn
65                      70                      75                      80
Asn Asp Leu Ala Tyr Ala Ser Ser Gln Phe Gln Gln Phe Cys His Met
                   85                      90                      95
Trp Asn Ile Gln His Ser Thr Gly Ile Pro Tyr Asn Pro Gln Gly Gln
                  100                     105                     110
Ala Ile Val Glu Cys Ala His Ser Thr Leu Lys Asn Met Leu Lys Lys
                  115                     120                     125
Gln Lys Arg Gly Val Trp Val Arg Thr Leu Gln His Tyr Trp His Lys
```

        130   135   140
Pro Tyr Leu Pro Leu Ile Phe Lys Ile
145   150

<210> 4885

<211> 562

<212> PRT

<213> Homo sapiens

<400> 4885

Met Leu Asp Thr Ile Ala Arg Ala Leu Gln Asp Leu Gly Arg Gln Val
  1   5   10   15
Leu Pro Thr Leu Pro Ser Leu Ser Gln Glu Glu Val Ser Ile Ile Trp
              20   25   30
Gly Asn Val Ser Glu Phe Val Arg Arg Gln Leu Thr Leu His Lys Gly
          35   40   45
Val Gln Ile Pro Ala Phe Gly Thr Phe Thr Phe Ile Arg Gln Lys Leu
      50   55   60
Glu Val Gly Asn Asn Lys Phe Ile Leu Ile Gln Arg Pro Val Phe Ile
65   70   75   80
Met Val Gly Lys Leu Val Gln Ile His Gly Leu Lys Gln Asn Lys Arg
                  85   90   95
Pro Gly Thr Val Asp Ser Val Leu Ser Ser Arg Glu Ala Leu Arg Lys
              100   105   110
Trp Pro Ser Ser Val Leu Ala Phe Pro Arg Ile Glu Leu Lys Glu Met
          115   120   125
Glu Asn Lys Leu Pro Met Glu Thr Leu Val Glu Glu Cys Gly Glu Asn
      130   135   140
Arg Glu Arg Lys Cys Lys Leu Lys Asp Gln Ser Asp Lys Glu Glu Gly
145   150   155   160
Thr Arg Asp Ile Ser Ser Pro Lys Arg Leu Arg Asp Arg Gln Ala Leu
                  165   170   175
Phe Pro Ala Lys Val Thr Asn Val Ser Leu Leu Glu Lys Phe Glu Arg
              180   185   190
Ser Glu Ser Gly Gly Lys Ile Met Thr Pro Glu Ser Leu Ser Tyr Pro

```
            195                  200                  205
Ser Cys Leu Lys His Asp Ser Glu Met Lys Pro Gln Thr Ser Pro Ala
        210                  215                  220
Cys Gln Asp His Asn Lys Ala Gly Gln Glu Met Cys Tyr Val Cys Leu
225                  230                  235                  240
Gln Arg Ala Gln Arg Asn Ser Leu Leu Tyr Tyr Ser Glu Glu Arg Arg
                245                  250                  255
Arg Glu Ile Glu Asp Glu Arg Leu Ile Gln Gln Tyr Gln Met Leu Lys
                260                  265                  270
Asp Gln Glu Ala Leu Phe Arg His Gln Met Lys Ser Leu Ala Thr Arg
                275                  280                  285
Glu Gln Asn Gln Lys Asn Ala Ala Tyr Asn Leu Gly Val Ala Glu Ala
                290                  295                  300
Ile Arg Asn His Lys Asn Glu Lys Pro Glu Phe Tyr Lys Ser Phe Leu
305                  310                  315                  320
Phe Asp Lys Arg Pro Leu Ser Pro Ala Leu Asn Ala Leu Lys Gln Glu
                325                  330                  335
Glu Tyr Ser Arg Ser Leu Leu Lys Gln Met Asp Asn Arg Gln Glu Asn
                340                  345                  350
Glu Ile Lys Gln Arg Gln Tyr Arg Glu Leu Met Asp Arg Leu Glu Gln
                355                  360                  365
Val Gln Leu Thr Glu Glu Leu Ala Ala Gln Arg Ala Lys Phe Leu Lys
                370                  375                  380
Asp Lys Met Glu Glu Thr Gln Cys Tyr Lys Arg Ala Leu Asp Ala Gln
385                  390                  395                  400
Ile Lys Asn Lys Pro Ser Arg Leu Pro Pro Phe Glu Pro Asp Ser Ser
                405                  410                  415
Glu Pro Ile Phe Gly Lys Asn Glu Gly Glu Leu Met Val Glu Lys Gln
                420                  425                  430
Lys Arg Glu Gln Asn Tyr Met Lys His Gln Leu Glu Ala Ala Ala Asn
                435                  440                  445
His Lys Arg Lys Ala Ile Leu His Gln Leu Val Asp Gln Arg Arg Asp
                450                  455                  460
Leu Gln Met Leu Gln Arg Thr Gln Arg Glu His Leu Ala Asp Arg Thr
465                  470                  475                  480
Ala Glu Leu Glu Arg Val Asn Arg Val Asn Gln Cys Leu Gln Glu Asp
```

                        485   490   495
Trp Glu Arg Ser Ala Ala Met Lys Lys Gln Arg Asp Leu Glu Asp Lys
            500   505   510
Ala Phe Glu Arg Ala Ser Asp Lys Leu Phe Leu Leu Asp Gln Cys Glu
            515   520   525
Lys Tyr Arg Arg Cys Lys Gln Cys Gln Arg Arg Thr Ser Asn Val Gly
        530   535   540
Glu Ser Asn Leu Trp Pro Leu Asn Lys Phe Leu Pro Gly Ser Arg Leu
545   550   555   560
Leu Val

<210> 4886
<211> 385
<212> PRT
<213> Homo sapiens

<400> 4886
Met Pro Lys Lys Leu Leu Leu Leu Pro Pro Pro Ser Ala Ser Ser Ala
 1   5   10   15
Phe Arg Val Pro Arg Ala Arg Pro Val Pro Pro Pro Ala Met Asn Ala
                20   25   30
Ala Arg Thr Gly Tyr Arg Val Phe Ser Ala Asn Ser Thr Ala Ala Cys
            35   40   45
Thr Glu Leu Ala Lys Arg Ile Thr Glu Arg Leu Gly Ala Glu Leu Gly
        50   55   60
Lys Ser Val Val Tyr Gln Glu Thr Asn Gly Glu Thr Arg Val Glu Ile
65   70   75   80
Lys Glu Ser Val Arg Gly Gln Asp Ile Phe Ile Ile Gln Thr Ile Pro
                85   90   95
Arg Asp Val Asn Thr Ala Val Met Glu Leu Leu Ile Met Ala Tyr Ala
                100   105   110
Leu Lys Thr Ala Cys Ala Arg Asn Ile Ile Gly Val Ile Pro Tyr Phe
            115   120   125
Pro Tyr Ser Lys Gln Ser Lys Met Arg Lys Arg Gly Ser Ile Val Cys

```
          130                    135                    140
Lys Leu Leu Ala Ser Met Leu Ala Lys Ala Gly Leu Thr His Ile Ile
145                    150                    155                    160
Thr Met Asp Leu His Gln Lys Glu Ile Gln Gly Phe Phe Ser Phe Pro
                      165                    170                    175
Val Asp Asn Leu Arg Ala Ser Pro Phe Leu Leu Gln Tyr Ile Gln Glu
                 180                    185                    190
Glu Ile Pro Asn Tyr Arg Asn Ala Val Ile Val Ala Lys Ser Pro Asp
                 195                    200                    205
Ala Ala Lys Arg Ala Gln Ser Tyr Ala Glu Arg Leu Arg Leu Gly Leu
        210                    215                    220
Ala Val Ile His Gly Glu Ala Gln Cys Thr Glu Leu Asp Met Asp Asp
225                    230                    235                    240
Gly Arg His Ser Pro Pro Met Val Lys Asn Ala Thr Val His Pro Gly
                 245                    250                    255
Leu Glu Leu Pro Leu Met Met Ala Lys Glu Lys Pro Pro Ile Thr Val
                 260                    265                    270
Val Gly Asp Val Gly Gly Arg Ile Ala Ile Ile Val Asp Tyr Ile Ile
                 275                    280                    285
Asp Asp Val Glu Ser Phe Val Ala Ala Ala Glu Ile Leu Lys Glu Arg
                 290                    295                    300
Gly Ala Tyr Lys Ile Tyr Val Met Ala Thr His Gly Ile Leu Ser Ala
305                    310                    315                    320
Glu Ala Pro Arg Leu Ile Glu Glu Ser Ser Val Asp Glu Val Val Val
                 325                    330                    335
Thr Asn Thr Val Pro His Glu Val Gln Lys Leu Gln Cys Pro Lys Ile
                 340                    345                    350
Lys Thr Val Asp Ile Ser Leu Ile Leu Ser Glu Ala Ile Arg Arg Ile
                 355                    360                    365
His Asn Gly Glu Ser Met Ala Tyr Leu Phe Arg Asn Ile Thr Val Asp
                 370                    375                    380
Asp
385
```

<210> 4887

<211> 621

<212> PRT

<213> Homo sapiens

<400> 4887

Met Asp Leu Leu Thr Arg Glu Asn Val Ala Leu Lys Val Glu Ser Ala
1   5   10   15

Gln Gln Pro Lys Gln Val Leu Lys Met Glu Val Ala Val Leu Lys Lys
                20   25   30

Leu Gln Gly Lys Asp His Val Cys Arg Phe Ile Gly Cys Gly Arg Asn
            35   40   45

Glu Lys Phe Asn Tyr Val Val Met Gln Leu Gln Gly Arg Asn Leu Ala
        50   55   60

Asp Leu Arg Arg Ser Gln Pro Arg Gly Thr Phe Thr Leu Ser Thr Thr
65   70   75   80

Leu Arg Leu Gly Lys Gln Ile Leu Glu Ser Ile Glu Ala Ile His Ser
                85   90   95

Val Gly Phe Leu His Arg Asp Ile Lys Pro Ser Asn Phe Ala Met Gly
                100   105   110

Arg Leu Pro Ser Thr Tyr Arg Lys Cys Tyr Met Leu Asp Phe Gly Leu
            115   120   125

Ala Arg Gln Tyr Thr Asn Thr Thr Gly Asp Val Arg Pro Pro Arg Asn
    130   135   140

Val Ala Gly Phe Arg Gly Thr Val Arg Tyr Ala Ser Val Asn Ala His
145   150   155   160

Lys Asn Arg Glu Met Gly Arg His Asp Asp Leu Trp Ser Leu Phe Tyr
                165   170   175

Met Leu Val Glu Phe Ala Val Gly Gln Leu Pro Trp Arg Lys Ile Lys
                180   185   190

Asp Lys Glu Gln Val Gly Met Ile Lys Glu Lys Tyr Glu His Arg Met
            195   200   205

Leu Leu Lys His Met Pro Ser Glu Phe His Leu Phe Leu Asp His Ile
    210   215   220

Ala Ser Leu Asp Tyr Phe Thr Lys Pro Asp Tyr Gln Leu Ile Met Ser
225   230   235   240

Val Phe Glu Asn Ser Met Lys Glu Arg Gly Ile Ala Glu Asn Glu Ala

```
                  245                    250                    255
Phe Asp Trp Glu Lys Ala Gly Thr Asp Ala Leu Leu Ser Thr Ser Thr
              260                    265                    270
Ser Thr Pro Pro Gln Gln Asn Thr Arg Gln Thr Ala Ala Met Phe Gly
              275                    280                    285
Val Val Asn Val Thr Pro Val Pro Gly Asp Leu Leu Arg Glu Asn Thr
          290                    295                    300
Glu Asp Val Leu Gln Gly Glu His Leu Ser Asp Gln Glu Asn Ala Pro
305                    310                    315                    320
Pro Ile Leu Pro Gly Arg Pro Ser Glu Gly Leu Gly Pro Ser Pro His
                  325                    330                    335
Leu Val Pro His Pro Gly Gly Pro Glu Ala Glu Val Trp Glu Gly Thr
              340                    345                    350
Asp Val Asn Arg Asn Lys Leu Arg Ile Asn Ile Gly Lys Ser Pro Cys
              355                    360                    365
Val Glu Glu Glu Gln Ser Arg Gly Met Gly Val Pro Ser Ser Pro Val
          370                    375                    380
Arg Ala Pro Pro Asp Ser Pro Thr Thr Pro Val Arg Ser Leu Arg Tyr
385                    390                    395                    400
Arg Arg Val Asn Ser Pro Glu Ser Glu Arg Leu Ser Thr Ala Asp Gly
                  405                    410                    415
Arg Val Glu Leu Pro Glu Arg Arg Ser Arg Met Asp Leu Pro Gly Ser
              420                    425                    430
Pro Ser Arg Gln Ala Cys Ser Ser Gln Pro Ala Gln Met Leu Ser Val
              435                    440                    445
Asp Thr Gly His Ala Asp Arg Gln Ala Ser Gly Arg Met Asp Val Ser
          450                    455                    460
Ala Ser Val Glu Gln Glu Ala Leu Ser Asn Ala Phe Arg Ser Val Pro
465                    470                    475                    480
Leu Ala Glu Glu Glu Asp Phe Asp Ser Lys Glu Trp Val Ile Ile Asp

                  485                    490                    495
Lys Glu Thr Glu Leu Lys Asp Phe Pro Pro Gly Ala Glu Pro Ser Thr
              500                    505                    510
Ser Gly Thr Thr Asp Glu Glu Pro Glu Glu Leu Arg Pro Leu Pro Glu
              515                    520                    525
```

Glu Gly Glu Glu Arg Arg Arg Leu Gly Ala Glu Pro Phe Pro Leu Thr
    530   535   540

Pro Ala Leu Gly Thr Pro Pro Ser Thr Glu Arg Val Gly Pro His Arg
545   550   555   560

Pro Thr Glu Thr Val Gly Gly Gly Gln Thr Leu Gly Ala Leu Pro Pro
        565   570   575

Ala Val Gln Pro Pro Ala Thr Thr Gly Val Leu Arg Val Leu Leu Leu
        580   585   590

His Ala Gly Asp Gly Ala Leu Pro Ser Pro Arg Arg Arg Arg Leu Leu
        595   600   605

Gly Leu Leu Arg Phe Pro His Ser Ala Gln Pro Leu Gly
        610   615   620

<210> 4888
<211> 267
<212> PRT
<213> Homo sapiens

<400> 4888
Met Phe Arg Arg Lys Ala Glu Gly Leu Asp Leu Ala Ser Cys Val Arg
  1   5   10   15

Ser Leu Asp Val Leu Val Leu Asp Glu Ala Asp Arg Leu Leu Asp Met
        20   25   30

Gly Phe Glu Ala Ser Ile Asn Thr Ile Leu Glu Phe Leu Pro Lys Gln
        35   40   45

Arg Arg Thr Gly Leu Phe Ser Ala Thr Gln Thr Gln Glu Val Glu Asn
        50   55   60

Leu Val Arg Ala Gly Leu Arg Asn Pro Val Arg Val Ser Val Lys Glu
65   70   75   80

Lys Gly Val Ala Ala Ser Ser Ala Gln Lys Thr Pro Ser Arg Leu Glu
        85   90   95

Asn Tyr Tyr Met Val Cys Lys Ala Asp Glu Lys Phe Asn Gln Leu Val
        100   105   110

His Phe Leu Arg Asn His Lys Gln Glu Lys His Leu Val Phe Phe Ser
        115   120   125

Thr Cys Ala Cys Val Glu Tyr Tyr Gly Lys Ala Leu Glu Val Leu Val
    130   135   140

Lys Gly Val Lys Ile Met Cys Ile His Gly Lys Met Lys Tyr Lys Arg
145   150   155   160

Asn Lys Ile Phe Met Glu Phe Arg Lys Leu Gln Ser Gly Ile Leu Val
            165   170   175

Cys Thr Asp Val Met Ala Arg Gly Ile Asp Ile Pro Glu Val Asn Trp
        180   185   190

Val Leu Gln Tyr Asp Pro Pro Ser Asn Ala Ser Ala Phe Val His Arg
        195   200   205

Cys Gly Arg Thr Ala Arg Ile Gly His Gly Gly Ser Ala Leu Val Phe
        210   215   220

Leu Leu Pro Met Glu Glu Ser Tyr Ile Asn Phe Leu Ala Ile Ser Gln
225   230   235   240

Lys Val Ser Cys Arg Pro Phe Ser Asp Arg Met Pro Ser Asp Gly Val
        245   250   255

Ala Gly Lys Val Leu Gln His Val Val Ser Asn
        260   265

<210> 4889

<211> 700

<212> PRT

<213> Homo sapiens

<400> 4889

Met Leu Ser Asp Asp His Val Asn Glu Ile Ile Ile Gln Lys Leu Ile
1   5   10   15

Ala Ser Leu Ile Pro Met Thr Ser Arg Asp Arg Ile Lys Ala Ile Arg
        20   25   30

Asn Gln Pro Arg Thr Met Glu Glu Lys Arg Asn Leu Ser Arg Gly Gly
        35   40   45

Leu Thr Ile Thr Thr Glu Asp Glu Gly Arg Ala Lys Ala His Leu Thr
        50   55   60

Trp Trp Lys Ile Val Asp Lys Glu Lys Ser Lys Gln Thr His Arg Ile
65   70   75   80

Leu Gln Leu Asn Cys Cys Ile Gln Cys Leu Asn Ser Ile Ser Arg Ala
                85   90   95

Tyr Arg Arg Ser Lys Asn Ser Leu Ser Glu Ile Leu Asn Ser Ile Ser
               100   105   110

Leu Trp Gln Lys Thr Leu Lys Ile Ile Gly Gly Lys Phe Gly Thr Ser
       115   120   125

Val Leu Ser Tyr Phe Asn Phe Leu Arg Trp Leu Leu Lys Phe Asn Ile
    130   135   140

Phe Ser Phe Ile Leu Asn Phe Ser Phe Ile Ile Ile Pro Gln Phe Thr
145   150   155   160

Val Ala Lys Lys Asn Thr Leu Gln Phe Thr Gly Leu Glu Phe Phe Thr
               165   170   175

Gly Val Gly Tyr Phe Arg Asp Thr Val Met Tyr Tyr Gly Phe Tyr Thr
               180   185   190

Asn Ser Thr Ile Gln His Gly Asn Ser Gly Ala Ser Tyr Asn Met Gln
               195   200   205

Leu Ala Tyr Ile Phe Thr Ile Gly Ala Cys Leu Thr Thr Cys Phe Phe
    210   215   220

Ser Leu Leu Phe Ser Met Ala Lys Tyr Phe Arg Asn Asn Phe Ile Asn
225   230   235   240

Pro His Ile Tyr Ser Gly Gly Ile Thr Lys Leu Ile Phe Cys Trp Asp
               245   250   255

Phe Thr Val Thr His Glu Lys Ala Val Lys Leu Lys Gln Lys Asn Leu
               260   265   270

Ser Thr Glu Ile Arg Glu Asn Leu Ser Glu Leu Arg Gln Glu Asn Ser
       275   280   285

Lys Leu Thr Phe Asn Gln Leu Leu Thr Arg Phe Ser Ala Tyr Met Val
    290   295   300

Ala Trp Val Val Ser Thr Gly Val Ala Ile Ala Cys Cys Ala Ala Val
305   310   315   320

Tyr Tyr Leu Ala Glu Tyr Asn Leu Glu Phe Leu Lys Thr His Ser Asn
               325   330   335

Pro Gly Ala Val Leu Leu Leu Pro Phe Val Val Ser Cys Ile Asn Leu
               340   345   350

Ala Val Pro Cys Ile Tyr Ser Met Phe Arg Leu Val Glu Arg Tyr Glu
               355   360   365

Met Pro Arg His Glu Val Tyr Val Leu Leu Ile Arg Asn Ile Phe Leu
    370   375   380

Lys Ile Ser Ile Ile Gly Ile Leu Cys Tyr Tyr Trp Leu Asn Thr Val
385   390   395   400

Ala Leu Ser Gly Glu Glu Cys Trp Gly Thr Leu Ile Gly Gln Asp Ile
           405   410   415

Tyr Arg Leu Leu Leu Met Asp Phe Val Phe Ser Leu Val Asn Ser Phe
         420   425   430

Leu Gly Glu Phe Leu Arg Arg Ile Ile Gly Met Gln Leu Ile Thr Ser
         435   440   445

Leu Gly Leu Gln Glu Phe Asp Ile Ala Arg Asn Val Leu Glu Leu Ile
         450   455   460

Tyr Ala Gln Thr Leu Val Trp Ile Gly Ile Phe Phe Arg Pro Leu Leu
465   470   475   480

Pro Phe Ile Gln Met Ile Met Leu Phe Ile Met Phe Tyr Ser Lys Asn
           485   490   495

Ile Ser Leu Met Met Asn Phe Gln Pro Pro Ser Lys Ala Trp Arg Ala
         500   505   510

Ser Gln Met Met Thr Phe Phe Ile Phe Leu Leu Phe Phe Pro Ser Phe
         515   520   525

Thr Gly Val Leu Cys Thr Leu Ala Ile Thr Ile Trp Arg Leu Lys Pro
         530   535   540

Ser Ala Asp Cys Gly Pro Phe Arg Gly Leu Pro Leu Phe Ile His Ser
545   550   555   560

Ile Tyr Ser Trp Ile Asp Thr Leu Ser Thr Arg Pro Gly Tyr Leu Trp
         565   570   575

Val Val Trp Ile Tyr Arg Asn Leu Ile Gly Ser Val His Phe Phe Phe
         580   585   590

Ile Leu Thr Leu Ile Val Leu Ile Ile Thr Tyr Leu Tyr Trp Gln Ile
         595   600   605

Thr Glu Gly Arg Lys Ile Met Ile Arg Leu Leu His Glu Gln Ile Ile
         610   615   620

Asn Glu Gly Lys Asp Lys Met Phe Leu Ile Glu Lys Leu Ile Lys Leu
625   630   635   640

Gln Asp Met Glu Lys Lys Ala Asn Pro Ser Ser Leu Val Leu Glu Arg
         645   650   655

Arg Glu Val Glu Gln Gln Gly Phe Cys Ile Trp Gly Asn Met Met Ala
          660   665   670
Val Leu Thr Cys Asp Leu Glu Asp Gln Phe Lys Lys Ala Ile Gln Gly
          675   680   685
Pro Asp Asp Ser Phe Gly Asn Gln Thr Pro Ile Lys
    690   695   700

<210> 4890

<211> 174

<212> PRT

<213> Homo sapiens

<400> 4890

Met Ile Ser Asn Leu Ser Trp Glu Leu Pro Gly Ser Leu Pro Leu Ile
    1   5   10   15
Ser Val Pro Tyr Ser Met His Cys Cys Thr Leu Gly Phe Leu Ser Cys
              20   25   30
Ser Leu Phe Leu His Met Ser Phe Glu Leu Lys Leu Leu Leu Leu Leu
          35   40   45
Leu Trp Leu Ala Ala Ser Cys Ser Leu Phe Leu His Ser His Ala Trp
          50   55   60
Leu Ser Glu Cys Leu Ile Val Arg Leu Tyr Leu Gly Pro Leu Asp Ser
65   70   75   80
Arg Pro Gly Val Leu Lys Glu Pro Lys Leu Met Gly Ala Ile Ser Phe
              85   90   95
Phe Ile Phe Phe Phe Thr Leu Leu Val Leu Ala Arg Gln Asn Glu Tyr
              100   105   110
Tyr Cys Arg Leu Asp Phe Leu Trp Lys Lys Lys Leu Arg Gln Glu Arg
          115   120   125
Glu Glu Thr Glu Thr Met Glu Asn Leu Thr Arg Leu Leu Leu Glu Asn
          130   135   140
Val Leu Pro Ala His Val Ala Pro Gln Phe Ile Gly Gln Asn Arg Arg
145   150   155   160
Asn Glu Ser Pro Val Pro Pro Gly Ser Leu Pro Pro Val Leu
              165   170

<210> 4891

<211> 546

<212> PRT

<213> Homo sapiens

<400> 4891

Met Ile His Thr Thr Glu Lys Pro Tyr Arg Cys Asn Glu Ser Gly Lys
1   5   10   15

Ala Phe His Arg Gly Ser Leu Leu Thr Val His Gln Ile Val His Thr
                20   25   30

Arg Gly Lys Pro Tyr Gln Cys Asp Val Cys Gly Arg Ile Phe Arg Gln
            35   40   45

Asn Ser Asp Leu Val Asn His Arg Arg Ser His Thr Gly Asp Lys Pro
        50   55   60

Tyr Ile Cys Asn Glu Cys Gly Lys Ser Phe Ser Lys Ser Ser His Leu
65   70   75   80

Ala Val His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
                85   90   95

Arg Cys Gly Lys Cys Phe Ser Gln Ser Ser Ser Leu Ala Thr His Gln
                100   105   110

Thr Val His Thr Gly Asp Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
            115   120   125

Thr Phe Lys Arg Asn Ser Ser Leu Thr Ala His His Ile Ile His Ala
        130   135   140

Gly Lys Lys Pro Tyr Thr Cys Asp Val Cys Gly Lys Val Phe Tyr Gln
145   150   155   160

Asn Ser Gln Leu Val Arg His Gln Ile Ile His Thr Gly Glu Thr Pro
                165   170   175

Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Phe Gln Arg Ser Arg Leu
            180   185   190

Ala Gly His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
        195   200   205

Glu Cys Gly Lys Val Phe Ser Gln His Ser His Leu Ala Val His Gln
210   215   220

Arg Val His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys
225   230   235   240

Ala Phe Asn Trp Gly Ser Leu Leu Thr Val His Gln Arg Ile His Thr
                245   250   255

Gly Glu Lys Pro Tyr Lys Cys Asn Val Cys Gly Lys Val Phe Asn Tyr
                260   265   270

Gly Gly Tyr Leu Ser Val His Met Arg Cys His Thr Gly Glu Lys Pro
        275   280   285

Leu His Cys Asn Lys Cys Gly Met Val Phe Thr Tyr Tyr Ser Cys Leu
    290   295   300

Ala Arg His Gln Arg Met His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
305   310   315   320

Val Cys Gly Lys Val Phe Ile Asp Ser Gly Asn Leu Ser Ile His Arg
                325   330   335

Arg Ser His Thr Gly Glu Lys Pro Phe Gln Cys Asn Glu Cys Gly Lys
                340   345   350

Val Phe Ser Tyr Tyr Ser Cys Leu Ala Arg His Arg Lys Ile His Thr
        355   360   365

Gly Glu Lys Pro Tyr Lys Cys Asn Asp Cys Gly Lys Ala Tyr Thr Gln
    370   375   380

Arg Ser Ser Leu Thr Lys His Leu Val Ile His Thr Gly Glu Asn Pro
385   390   395   400

Tyr His Cys Asn Glu Phe Gly Glu Ala Phe Ile Gln Ser Ser Lys Leu
                405   410   415

Ala Arg Tyr His Arg Asn Pro Thr Gly Glu Lys Pro His Lys Cys Ser
            420   425   430

Glu Cys Gly Arg Thr Phe Ser His Lys Thr Ser Leu Val Tyr His Gln
        435   440   445

Arg Arg His Thr Gly Glu Met Pro Tyr Lys Cys Ile Glu Cys Gly Lys
    450   455   460

Val Phe Asn Ser Thr Thr Thr Leu Ala Arg His Arg Arg Ile His Thr
465   470   475   480

Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Val Phe Arg Tyr
                485   490   495

Arg Ser Gly Leu Ala Arg His Trp Ser Ile His Thr Gly Glu Lys Pro
        500   505   510

Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Arg Val Arg Ser Ile Leu
         515   520   525
Leu Asn His Gln Met Met His Thr Gly Glu Lys Pro Tyr Lys Cys Asn
         530   535   540
Glu Cys
545

<210> 4892
<211> 113
<212> PRT
<213> Homo sapiens

<400> 4892
Met Met His Leu Gln Pro Ala Trp Ser Ser Phe Gly Gln Ser Gly Pro
 1   5   10   15
Ile Leu Met Arg Ser Gly Gly Met Gln Leu Leu Leu Leu Pro His Gly
                20   25   30
Ser Val Arg Pro Asn Gln Pro Ala Leu Ser Pro Leu Pro Ala Val Tyr
         35   40   45
Gln Val Ala Leu Glu Arg Gly His Pro Glu Gly Thr Thr Cys Ala Ala
         50   55   60
Val Gly Gly Gly Lys Ile Asn Arg Pro Arg Thr Pro Gly Gln Ala Gly
 65   70   75   80
Ala Thr Glu Glu Val Ser Ser Lys Gly Gly Lys Leu Ser Gly Leu Phe
                85   90   95
Leu Thr Ile Leu Pro Val Pro Arg Pro Trp Thr Ala Gly Gln Pro Gln
                100   105   110
Ser

<210> 4893
<211> 129
<212> PRT
<213> Homo sapiens

<400> 4893

Met Met Thr Asp Leu Lys Gln Ser His Ser Val Arg Leu Asn Asp Gly
1   5   10   15

Pro Phe Met Pro Val Leu Gly Phe Gly Thr Tyr Ala Pro Asp His Thr
                20   25   30

Pro Lys Ser Gln Ala Ala Glu Ala Thr Lys Val Ala Ile Asp Val Gly
        35   40   45

Phe Arg His Ile Asp Ser Ala Tyr Leu Tyr Gln Asn Glu Glu Glu Val
    50   55   60

Gly Gln Ala Ile Trp Glu Lys Ile Ala Asp Gly Thr Val Lys Arg Glu
65   70   75   80

Glu Ile Phe Tyr Thr Ile Lys Leu Trp Ala Thr Phe Phe Arg Ala Glu
                85   90   95

Leu Val His Pro Ala Leu Glu Arg Ser Leu Lys Lys Leu Gly Pro Asp
                100   105   110

Tyr Val Asp Leu Phe Ile Ile His Val Pro Phe Ala Met Lys Gly Ser
                115   120   125

Ser

<210> 4894
<211> 105
<212> PRT
<213> Homo sapiens

<400> 4894

Met Cys Pro Val Cys Gly Arg Ala Leu Ser Ser Pro Gly Ser Leu Gly
1   5   10   15

Arg His Leu Leu Ile His Ser Glu Asp Gln Arg Ser Asn Cys Ala Val
                20   25   30

Cys Gly Ala Arg Phe Thr Ser His Ala Thr Phe Asn Arg Ser Ala Gly
        35   40   45

His Leu Ser Leu Leu Cys Trp Glu Gln Ile Thr Gly Cys Glu Phe Cys
    50   55   60

Phe Leu Lys Ser Lys Arg Arg Leu Glu Ile Gly Asn Ala Lys Ala Ala
65   70   75   80

Asp Ala Cys Ser Leu Glu Val Gln Val Arg Arg Leu Gly Asn Met Pro
              85   90   95

Ile Pro Ser His Ser Pro Lys Gly Lys
            100   105

<210> 4895

<211> 646

<212> PRT

<213> Homo sapiens

<400> 4895

Met Phe Leu Ser Ile Ser Thr Arg Leu Pro Ser Gln Tyr Ile Tyr Gly
1   5   10   15

Phe Gly Glu Thr Glu His Thr Thr Phe Arg Arg Asn Met Asn Trp Asn
              20   25   30

Thr Trp Gly Met Phe Ala His Asp Glu Pro Pro Ala Tyr Lys Lys Asn
              35   40   45

Ser Tyr Gly Val His Pro Tyr Tyr Met Ala Leu Glu Glu Asp Gly Ser
            50   55   60

Ala His Gly Val Leu Leu Leu Asn Ser Asn Ala Met Asp Val Thr Leu
65   70   75   80

Gln Pro Thr Pro Ala Leu Thr Tyr Arg Thr Thr Gly Gly Ile Leu Asp
              85   90   95

Phe Tyr Ile Val Leu Gly Pro Thr Pro Glu Leu Val Thr Gln Gln Tyr
            100   105   110

Thr Glu Leu Ile Gly Arg Pro Ala Met Ile Pro Tyr Trp Ala Leu Gly
            115   120   125

Phe His Leu Ser Arg Tyr Gly Tyr Gln Asn Asp Ala Glu Ile Ser Ser
            130   135   140

Leu Tyr Asp Ala Met Val Ala Ala Gln Ile Pro Tyr Asp Val Gln His
145   150   155   160

Val Asp Ile Asp Tyr Met Asn Arg Lys Leu Asp Phe Thr Leu Ser Ala
            165   170   175

Asn Phe Gln Asn Leu Ser Leu Leu Ile Glu Gln Met Lys Lys Asn Gly
            180   185   190

Met Arg Phe Ile Leu Ile Leu Asp Pro Ala Ile Ser Gly Asn Glu Thr
            195   200   205

Gln Tyr Leu Pro Phe Ile Arg Gly Gln Glu Asn Asn Val Phe Ile Lys
    210   215   220

Trp Pro Asp Thr Asn Asp Ile Val Trp Gly Lys Val Trp Pro Asp Leu
225   230   235   240

Pro Asn Val Ile Val Asp Gly Ser Leu Asp His Glu Thr Gln Val Lys
            245   250   255

Leu Tyr Arg Ala Tyr Val Ala Phe Pro Asp Phe Phe Arg Asn Ser Thr
            260   265   270

Ala Ala Trp Trp Lys Lys Glu Ile Glu Glu Leu Tyr Ala Asn Pro Arg
            275   280   285

Glu Pro Glu Lys Ser Leu Lys Phe Asp Gly Leu Trp Ile Asp Met Asn
    290   295   300

Glu Pro Ser Asn Phe Val Asp Gly Ser Val Arg Gly Cys Ser Asn Glu
305   310   315   320

Met Leu Asn Asn Pro Pro Tyr Met Pro Tyr Leu Glu Ser Arg Asp Lys
            325   330   335

Gly Leu Ser Ser Lys Thr Leu Cys Met Glu Ser Gln Gln Ile Leu Pro
            340   345   350

Asp Ser Ser Pro Val Glu His Tyr Asn Val His Asn Leu Tyr Gly Trp
            355   360   365

Ser Gln Thr Arg Pro Thr Tyr Glu Ala Val Gln Glu Val Thr Gly Gln
    370   375   380

Arg Gly Val Ile Ile Thr Arg Ser Thr Phe Pro Ser Ser Gly Arg Trp
385   390   395   400

Gly Gly His Arg Leu Gly Asn Asn Thr Ala Ala Trp Asp Gln Leu Gly
            405   410   415

Lys Ser Ile Ile Gly Met Met Glu Phe Ser Leu Phe Gly Ile Pro Tyr
            420   425   430

Thr Gly Ala Asp Ile Cys Gly Phe Phe Gly Asp Ala Glu Tyr Glu Met
            435   440   445

Cys Val Arg Trp Met Gln Leu Gly Ala Phe Tyr Pro Phe Ser Arg Asn
    450   455   460

His Asn Asn Ile Gly Thr Arg Arg Gln Asp Pro Val Ala Trp Asn Ser
465   470   475   480

Thr Phe Glu Met Leu Ser Arg Lys Val Leu Glu Thr Arg Tyr Thr Leu
                485   490   495

Leu Pro Tyr Leu Tyr Thr Leu Met His Lys Ala His Val Glu Gly Ser
            500   505   510

Thr Val Val Arg Pro Leu Leu His Glu Phe Thr Asp Asp Arg Thr Thr
        515   520   525

Trp Asp Ile Asp Arg Gln Phe Met Leu Gly Pro Ala Ile Leu Ile Ser
    530   535   540

Pro Val Leu Glu Thr Ser Thr Phe Glu Ile Ser Ala Tyr Phe Pro Arg
545   550   555   560

Ala Arg Trp Tyr Asp Tyr Ser Thr Gly Thr Ser Ser Thr Ser Thr Gly
            565   570   575

Gln Arg Lys Ile Leu Lys Ala Pro Leu Asp His Ile Asn Leu His Val
            580   585   590

Arg Gly Gly Tyr Ile Leu Pro Trp Gln Glu Pro Ala Met Asn Thr His
        595   600   605

Ser Ser Arg Gln Asn Phe Met Gly Leu Ile Val Ala Leu Asp Asp Asn
    610   615   620

Gly Thr Ala Glu Gly Gln Val Phe Trp Asp Asp Gly Gln Ser Ile Val
625   630   635   640

Phe Asn Thr Thr Ala Met
            645

<210> 4896
<211> 472
<212> PRT
<213> Homo sapiens

<400> 4896
Met Ala Ser Pro Pro Arg Cys Ser Pro Thr Ala His Asp Arg Glu Cys
1   5   10   15

Lys Leu Pro Pro Pro Ser Ala Pro Ala Ser Glu Tyr Cys Pro Gly Lys
            20   25   30

Leu Ser Trp Gly Thr Met Ala Arg Ala Leu Gly Arg Phe Lys Leu Ser
     35   40   45

Ile Pro His Thr His Leu Leu Ala Thr Leu Asp Pro Leu Ala Leu Asp
     50   55   60

Arg Glu Pro Pro Pro His Leu Leu Pro Glu Lys His Gln Val Pro Glu
65   70   75   80

Lys Leu Ile Trp Gly Asp Gln Asp Pro Leu Ser Lys Ile Pro Phe Lys
          85   90   95

Ile Leu Ser Gly His Glu His Ala Val Ser Thr Cys His Phe Cys Val
         100   105   110

Asp Asp Thr Lys Leu Leu Ser Gly Ser Tyr Asp Cys Thr Val Lys Leu
         115   120   125

Trp Asp Pro Val Asp Gly Ser Val Val Arg Asp Phe Glu His Arg Pro
      130   135   140

Lys Ala Pro Val Val Glu Cys Ser Ile Thr Gly Asp Ser Ser Arg Val
145   150   155   160

Ile Ala Ala Ser Tyr Asp Lys Thr Val Arg Ala Trp Asp Leu Glu Thr
         165   170   175

Gly Lys Leu Leu Trp Lys Val Arg Tyr Asp Thr Phe Ile Val Ser Cys
         180   185   190

Lys Phe Ser Pro Asp Gly Lys Tyr Val Val Ser Gly Phe Asp Val Asp
         195   200   205

His Gly Ile Cys Ile Met Asp Ala Glu Asn Ile Thr Thr Val Ser Val
      210   215   220

Ile Lys Asp His His Thr Arg Ser Ile Thr Ser Cys Cys Phe Asp Pro
225   230   235   240

Asp Ser Gln Arg Val Ala Ser Val Ser Leu Asp Arg Cys Ile Lys Ile
         245   250   255

Trp Asp Val Thr Ser Gln Ala Thr Leu Leu Thr Ile Thr Lys Ala His
         260   265   270

Ser Asn Ala Ile Ser Asn Cys Cys Phe Thr Phe Ser Gly His Phe Leu
         275   280   285

Cys Thr Ser Ser Trp Asp Lys Asn Leu Lys Ile Trp Asn Val His Thr
      290   295   300

Gly Glu Phe Arg Asn Arg Gly Ala Cys Val Thr Leu Met Gln Gly His
305   310   315   320

Glu Gly Ser Val Ser Ser Cys His Phe Ala Arg Asp Ser Ser Phe Leu
              325   330   335

Ile Ser Gly Gly Phe Asp Arg Thr Val Ala Ile Trp Asp Val Ala Glu
              340   345   350

Gly Tyr Arg Lys Leu Ser Leu Lys Gly His Asn Asp Trp Val Met Asp
              355   360   365

Val Ala Ile Ser Asn Asn Lys Lys Trp Ile Leu Ser Ala Ser Lys Asp
          370   375   380

Arg Thr Met Arg Leu Trp Asn Ile Glu Glu Ile Asp Glu Ile Pro Leu
385   390   395   400

Val Ile Lys Tyr Lys Lys Ala Val Gly Leu Lys Leu Lys Gln Cys Glu
              405   410   415

Arg Cys Asp Arg Pro Phe Ser Ile Phe Lys Ser Asp Thr Ser Ser Glu
              420   425   430

Met Phe Thr Gln Cys Val Phe Cys Arg Ile Asp Thr Arg Gly Leu Pro
              435   440   445

Ala Asp Thr Ser Ser Ser Ser Ser Ser Glu Arg Glu Asn Ser Pro
          450   455   460

Pro Pro Arg Gly Ser Lys Asp Asp
465   470

<210> 4897

<211> 466

<212> PRT

<213> Homo sapiens

<400> 4897

Met Phe Val Gly Val Ala Arg His Ser Gly Ser Gln Asp Glu Val Ser
  1   5   10   15

Arg Gly Val Glu Pro Leu Asp Ala Ala Arg Ala Gln Pro Ala Lys Asp
              20   25   30

Arg Arg Ala Lys Gly Thr Pro Lys Ser Ser Lys Pro Gly Lys Lys His
              35   40   45

Arg Tyr Leu Arg Leu Leu Pro Glu Ala Leu Ile Arg Phe Gly Gly Phe
          50   55   60

Arg Lys Arg Lys Lys Ala Lys Ser Ser Val Ser Lys Lys Pro Gly Glu
65   70   75   80

Val Asp Asp Ser Leu Glu Gln Pro Cys Gly Leu Gly Cys Leu Val Ser
                    85   90   95

Thr Cys Cys Glu Cys Cys Asn Asn Ile Arg Cys Phe Met Ile Phe Tyr
                100   105   110

Cys Ile Leu Leu Ile Cys Gln Gly Val Val Phe Gly Leu Ile Asp Val
            115   120   125

Ser Ile Gly Asp Phe Gln Lys Glu Tyr Gln Leu Lys Thr Ile Glu Lys
        130   135   140

Leu Ala Leu Glu Lys Ser Tyr Asp Ile Ser Ser Gly Leu Val Ala Ile
145   150   155   160

Phe Ile Ala Phe Tyr Gly Asp Arg Lys Lys Val Ile Trp Phe Val Ala
                165   170   175

Ser Ser Phe Leu Ile Gly Leu Gly Ser Leu Leu Cys Ala Phe Pro Ser
                180   185   190

Ile Asn Glu Glu Asn Lys Gln Ser Lys Val Gly Ile Glu Gly Ile Ala
            195   200   205

Glu Cys Thr Ser Met Ile Gly Tyr Ala Leu Gly Tyr Val Leu Gly Ala
    210   215   220

Pro Leu Val Lys Val Pro Glu Asn Thr Thr Ser Ala Thr Lys Thr Gly
225   230   235   240

Lys Leu Gly Asn Leu Thr Ala Pro Cys Asn Glu Lys Cys Arg Cys Ser
                245   250   255

Ser Ser Ile Tyr Ser Ser Ile Cys Gly Arg Asp Asp Ile Glu Tyr Phe
                260   265   270

Ser Pro Cys Phe Ala Gly Cys Thr Tyr Ser Lys Ala Gln Asn Gln Lys

        275   280   285

Lys Met Tyr Tyr Asn Cys Ser Cys Ile Lys Glu Gly Leu Ile Thr Ala
    290   295   300

Asp Ala Glu Gly Asp Phe Ile Asp Ala Arg Pro Gly Lys Cys Asp Ala
305   310   315   320

Lys Cys Tyr Lys Leu Pro Leu Phe Ile Ala Phe Ile Phe Ser Thr Leu
                325   330   335

Ile Phe Ser Gly Phe Ser Gly Val Pro Ile Val Leu Ala Met Thr Arg

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              340                    345                    350
Val Val Pro Asp Lys Leu Arg Ser Leu Ala Leu Gly Val Ser Tyr Val
             355                    360                    365
Ile Leu Arg Ile Phe Gly Thr Ile Pro Gly Pro Ser Ile Phe Lys Met
        370                    375                    380
Ser Gly Glu Thr Ser Cys Ile Leu Arg Asp Val Asn Lys Cys Gly His
385                    390                    395                    400
Arg Gly Arg Cys Trp Ile Tyr Asn Lys Thr Lys Met Ala Phe Leu Leu
                  405                    410                    415
Val Gly Ile Cys Phe Leu Cys Lys Leu Cys Thr Ile Ile Phe Thr Thr
             420                    425                    430
Ile Ala Phe Phe Ile Tyr Lys Arg Arg Leu Asn Glu Asn Thr Asp Phe
        435                    440                    445
Pro Asp Val Thr Val Lys Asn Pro Lys Val Lys Lys Lys Glu Glu Thr
    450                    455                    460
Asp Leu
465
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<210> 4898
<211> 679
<212> PRT
<213> Homo sapiens

<400> 4898
Met Met His Tyr Leu Lys Asn Ile Met Ile Ala Val Val Glu Ser Met
  1                 5                    10                    15
Ile Asn Lys Phe Glu Glu Asp Glu Thr Arg Asn Gln Glu Arg Gln Lys
             20                    25                    30
Lys Ile Gln Lys Glu Lys Ser His Ser Tyr Arg Thr Asp Asn Cys Ser
        35                    40                    45
Asp Ser Asp Ser Ser Leu Asn Gln Ser Tyr Lys Phe Cys Gln Gly Lys
    50                    55                    60
Leu Gln Leu Ile Leu Asp Gln Leu Asp Pro Gly Gln Pro Lys Glu Val
65                    70                    75                    80
Arg Tyr Glu Ala Leu Gln Thr Leu Cys Ser Ala Pro Pro Ser Asp Val
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                    85                      90                      95
Leu Asn Cys Glu Asn Trp Thr Thr Leu Cys Glu Lys Leu Thr Val Ser
                100                 105                 110
Leu Ser Asp Pro Asp Pro Val Phe Ser Asp Arg Ile Leu Lys Phe Cys


               115                 120                 125
Ala Gln Thr Phe Leu Leu Ser Pro Leu His Met Thr Lys Glu Ile Tyr
            130                 135                 140
Thr Ser Leu Ala Lys Tyr Leu Glu Ser Tyr Phe Leu Ser Arg Glu Asn
145                 150                 155                 160
His Ile Pro Thr Leu Ser Ala Gly Val Asp Ile Thr Asn Pro Asn Met
                165                 170                 175
Thr Arg Leu Leu Lys Lys Val Arg Leu Leu Asn Glu Tyr Gln Lys Glu
                180                 185                 190
Ala Pro Ser Phe Trp Ile Arg His Pro Glu Lys Tyr Met Glu Glu Ile
            195                 200                 205
Val Glu Ser Thr Leu Ser Leu Leu Thr Val Lys His Asn Gln Ser His
    210                 215                 220
Val Val Ser Gln Lys Ile Leu Asp Pro Ile Tyr Phe Phe Ala Leu Val
225                 230                 235                 240
Asp Thr Lys Ala Val Trp Phe Lys Lys Trp Met His Ala His Tyr Ser
                245                 250                 255
Arg Thr Thr Val Leu Arg Leu Leu Glu Lys Lys Tyr Lys Ser Leu Val
                260                 265                 270
Thr Thr Ala Ile Gln Gln Cys Val Gln Tyr Phe Glu Met Cys Lys Thr
            275                 280                 285
Arg Lys Ala Asp Glu Thr Leu Gly His Ser Lys His Cys Arg Asn Lys
    290                 295                 300
Gln Lys Thr Phe Tyr Tyr Leu Gly Gln Glu Leu Gln Tyr Ile Tyr Phe
305                 310                 315                 320
Ile His Ser Leu Cys Leu Leu Gly Arg Leu Leu Ile Tyr Lys Gln Gly
                325                 330                 335
Arg Lys Leu Phe Pro Ile Lys Leu Lys Asn Lys Lys Gly Leu Val Ser
            340                 345                 350
Leu Ile Asp Leu Leu Val Leu Phe Thr Gln Leu Ile Tyr Tyr Ser Pro
            355                 360                 365
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Ser Cys Pro Lys Met Thr Ser Ala Ala His Ser Glu Asn Tyr Ser Pro
    370             375             380
Ala Ser Met Val Thr Glu Val Leu Trp Ile Leu Ser Asp Gln Lys Glu
385             390             395             400
Cys Ala Val Glu Cys Leu Tyr Asn Asn Ile Val Ile Glu Thr Leu Leu
            405             410             415
Gln Pro Ile His Asn Leu Met Lys Gly Asn Glu Ala Ser Pro Asn Cys
            420             425             430
Ser Glu Thr Ala Leu Ile His Ile Ala Gly Ile Leu Ala Arg Ile Ala
        435             440             445
Ser Val Glu Glu Gly Leu Ile Leu Leu Leu Tyr Gly Ala Asn Met Asn
    450             455             460
Ser Ser Glu Glu Ser Pro Thr Gly Ala His Ile Ile Ala Gln Phe Ser
465             470             475             480
Lys Lys Leu Leu Asp Glu Asp Ile Ser Ile Phe Ser Gly Ser Glu Met
            485             490             495
Leu Pro Val Val Lys Gly Ala Phe Ile Ser Val Cys Arg His Ile Tyr
            500             505             510
Ser Thr Cys Glu Gly Leu Gln Val Leu Ile Thr Tyr Asn Leu His Glu
        515             520             525
Ser Ile Ala Lys Ala Trp Lys Lys Thr Ser Leu Leu Ser Glu Arg Ile
    530             535             540
Pro Thr Pro Val Glu Gly Ser Asp Ser Val Ser Ser Val Ser Gln Glu
545             550             555             560
Ser Gln Asn Ile Met Ala Trp Glu Asp Asn Leu Leu Asp Asp Leu Leu
            565             570             575
His Phe Ala Ala Thr Pro Lys Gly Leu Leu Leu Leu Gln Arg Thr Gly
            580             585             590
Ala Ile Asn Glu Cys Val Thr Phe Ile Phe Asn Arg Tyr Ala Lys Lys
    595             600             605
Leu Gln Val Ser Arg His Lys Lys Phe Gly Tyr Gly Val Leu Val Thr
    610             615             620
Arg Val Ala Ser Thr Ala Ala Gly Gly Ile Ala Leu Lys Lys Ser Gly
625             630             635             640
Phe Ile Asn Glu Leu Ile Thr Glu Leu Trp Ser Asn Leu Glu Tyr Gly
            645             650             655
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Arg Asp Asp Val Arg Val Thr His Pro Arg Thr Thr Pro Val Asp Pro
         660   665   670

Ile Asp Arg Ser Cys Gln Lys
       675

<210> 4899

<211> 1148

<212> PRT

<213> Homo sapiens

<400> 4899

Met Val Leu Asn Leu Tyr Gln Leu Asn Gln Leu Asp Cys Pro Gly Gly
1   5   10   15

Arg Leu Ile Gly Gly Trp Glu Asp Asn Pro Phe Lys Gly Asp Leu Lys
          20   25   30

Ile Val Leu Arg Gly Asn His Thr Thr Gln Asp Trp Ala Leu Pro Glu
         35   40   45

Gly Pro Asn Gln Gly Ala Lys Val Leu Gly Val Phe Gly Glu Leu Asp
     50   55   60

Leu His Gly Ile Pro His Ser Ile Tyr Lys Thr Lys Leu Ser Glu Thr
65   70   75   80

Ala Phe Ala Gly Ser Lys Val Leu Ser Leu Met Asp Ala Val Asp Trp
          85   90   95

Gln Glu Gly Glu Glu Ile Val Ile Thr Thr Thr Ser Tyr Asp Phe His
         100   105   110

Gln Thr Glu Thr Arg Ser Ile Val Lys Ile Leu His Asp His Lys Ile
         115   120   125

Leu Ile Leu Asn Asp Ser Leu Ser Tyr Thr His Phe Ala Glu Lys Tyr
     130   135   140

His Val Pro Gly Thr Gly Glu Ser Tyr Thr Leu Ala Ala Asp Val Gly
145   150   155   160

Ile Leu Ser Arg Asn Ile Lys Ile Val Gly Glu Asp Tyr Pro Gly Trp
         165   170   175

Ser Glu Asp Ser Phe Gly Ala Arg Val Leu Val Gly Ser Phe Thr Glu
         180   185   190

Asn Met Met Thr Phe Lys Gly Asn Ala Arg Ile Ser Asn Val Glu Phe
      195   200   205

Tyr His Ser Gly Gln Glu Gly Phe Arg Asp Ser Thr Asp Pro Arg Tyr
      210   215   220

Ala Val Thr Phe Leu Asn Leu Gly Gln Ile Gln Glu His Gly Ser Ser
225   230   235   240

Tyr Ile Arg Gly Cys Ala Phe His His Gly Phe Ser Pro Ala Ile Gly
          245   250   255

Val Phe Gly Thr Asp Gly Leu Asp Ile Asp Asp Asn Ile Ile His Phe
          260   265   270

Thr Val Gly Glu Gly Ile Arg Ile Trp Gly Asn Ala Asn Arg Val Arg
        275   280   285

Gly Asn Leu Ile Ala Leu Ser Val Trp Pro Gly Thr Tyr Gln Asn Arg
      290   295   300

Lys Asp Leu Ser Ser Thr Leu Trp His Ala Ala Ile Glu Ile Asn Arg
305   310   315   320

Gly Thr Asn Thr Val Leu Gln Asn Asn Val Val Ala Gly Phe Gly Arg
          325   330   335

Ala Gly Tyr Arg Ile Asp Gly Glu Pro Cys Pro Gly Gln Phe Asn Pro
          340   345   350

Val Glu Lys Trp Phe Asp Asn Glu Ala His Gly Gly Leu Tyr Gly Ile
        355   360   365

Tyr Met Asn Gln Asp Gly Leu Pro Gly Cys Ser Leu Ile Gln Gly Phe
      370   375   380

Thr Ile Trp Thr Cys Trp Asp Tyr Gly Ile Tyr Phe Gln Thr Thr Glu
385   390   395   400

Ser Val His Ile Tyr Asn Val Thr Leu Val Asp Asn Gly Met Ala Ile
          405   410   415

Phe Pro Met Ile Tyr Met Pro Ala Ala Ile Ser His Lys Ile Ser Ser
          420   425   430

Lys Asn Val Gln Ile Lys Ser Ser Leu Ile Val Gly Ser Ser Pro Gly
        435   440   445

Phe Asn Cys Ser Asp Val Leu Thr Asn Asp Asp Pro Asn Ile Glu Leu
      450   455   460

Thr Ala Ala His Arg Ser Pro Arg Ser Pro Ser Gly Gly Arg Ser Gly
465   470   475   480

Ile Arg Trp Pro Thr Phe Ala Ser Ala His Asn Met Ala Pro Arg Lys
          485   490   495

Pro His Ala Gly Ile Met Ser Tyr Asn Ala Ile Ser Gly Leu Leu Asp
          500   505   510

Ile Ser Gly Ser Thr Phe Val Gly Phe Lys Asn Val Cys Ser Gly Glu
          515   520   525

Thr Asn Val Ile Phe Ile Thr Asn Pro Leu Asn Glu Asp Leu Gln His
          530   535   540

Pro Ile His Val Lys Asn Ile Lys Leu Val Asp Thr Thr Glu Gln Ser
545   550   555   560

Lys Ile Phe Ile His Arg Pro Asp Ile Ser Lys Val Asn Pro Ser Asp
          565   570   575

Cys Val Asp Met Val Cys Asp Ala Lys Arg Lys Ser Phe Leu Arg Asp
          580   585   590

Ile Asp Gly Ser Phe Leu Gly Asn Ala Gly Ser Val Ile Pro Gln Ala
          595   600   605

Glu Tyr Glu Trp Asp Gly Asn Ser Gln Val Gly Ile Gly Asp Tyr Arg
          610   615   620

Ile Pro Lys Ala Met Leu Thr Phe Leu Asn Gly Ser Arg Ile Pro Val
625   630   635   640

Thr Glu Lys Ala Pro His Lys Gly Ile Ile Arg Asp Ser Thr Cys Lys
          645   650   655

Tyr Leu Pro Glu Trp Gln Ser Tyr Gln Cys Phe Gly Met Glu Tyr Ala
          660   665   670

Met Met Val Ile Glu Ser Leu Asp Pro Asp Thr Glu Thr Arg Arg Leu
          675   680   685

Ser Pro Val Ala Ile Met Gly Asn Gly Tyr Val Asp Leu Ile Asn Gly
          690   695   700

Pro Gln Asp His Gly Trp Cys Ala Gly Tyr Thr Cys Gln Arg Arg Leu
705   710   715   720

Ser Leu Phe His Ser Ile Val Ala Leu Asn Lys Ser Tyr Glu Val Tyr
          725   730   735

Phe Thr Gly Thr Ser Pro Gln Asn Leu Arg Leu Met Leu Leu Asn Val
          740   745   750

Asp His Asn Lys Ala Val Leu Val Gly Ile Phe Phe Ser Thr Leu Gln
          755   760   765

Arg Leu Asp Val Tyr Val Asn Asn Leu Leu Val Cys Pro Lys Thr Thr
    770   775   780

Ile Trp Asn Ala Gln Gln Lys His Cys Glu Leu Asn Asn His Leu Tyr
785   790   795   800

Lys Asp Gln Phe Leu Pro Asn Leu Asp Ser Thr Val Leu Gly Glu Asn
          805   810   815

Tyr Phe Asp Gly Thr Tyr Gln Met Leu Tyr Leu Leu Val Lys Gly Thr
          820   825   830

Ile Pro Val Glu Ile His Thr Ala Thr Val Ile Phe Val Ser Phe Gln
          835   840   845

Leu Ser Val Ala Thr Glu Asp Asp Phe Tyr Thr Ser His Asn Leu Val
    850   855   860

Lys Asn Leu Ala Leu Phe Leu Lys Ile Pro Ser Asp Lys Ile Arg Ile
865   870   875   880

Ser Lys Ile Arg Gly Lys Ser Leu Arg Arg Lys Arg Ser Met Gly Phe
          885   890   895

Ile Ile Glu Ile Glu Ile Gly Asp Pro Pro Ile Gln Phe Ile Ser Asn
          900   905   910

Gly Thr Thr Gly Gln Met Gln Leu Ser Glu Leu Gln Glu Ile Ala Gly
          915   920   925

Ser Leu Gly Gln Ala Val Ile Leu Gly Asn Ile Ser Ser Ile Leu Gly
    930   935   940

Phe Asn Ile Ser Ser Met Ser Ile Thr Asn Pro Leu Pro Ser Pro Ser
945   950   955   960

Asp Ser Gly Trp Ile Lys Val Thr Ala Gln Pro Val Glu Arg Ser Ala
          965   970   975

Phe Pro Val His His Val Ala Phe Val Ser Ser Leu Leu Val Ile Thr
          980   985   990

Gln Pro Val Ala Ala Gln Pro Gly Gln Pro Phe Pro Gln Gln Pro Ser
          995   1000   1005

Val Lys Ala Thr Asp Ser Asp Gly Asn Cys Val Ser Val Gly Ile Thr
    1010   1015   1020

Ala Leu Thr Leu Arg Ala Ile Leu Lys Asp Ser Asn Asn Asn Gln Val
1025   1030   1035   1040

Asn Gly Leu Ser Gly Asn Thr Thr Ile Pro Phe Ser Ser Cys Trp Ala
          1045   1050   1055

Asn Tyr Thr Asp Leu Thr Pro Leu Arg Thr Gly Lys Asn Tyr Lys Ile
            1060   1065   1070

Glu Phe Ile Leu Asp Asn Val Val Gly Val Glu Ser Arg Thr Phe Ser
            1075   1080   1085

Leu Leu Ala Glu Ser Val Ser Ser Ser Gly Ser Ser Ser Ser Ser Asn
        1090   1095   1100

Ser Lys Ala Ser Thr Val Gly Thr Tyr Ala Gln Ile Met Thr Val Val
1105   1110   1115   1120

Ile Ser Cys Leu Val Gly Arg Met Trp Leu Leu Glu Ile Phe Met Ala
                1125   1130   1135

Ala Val Ser Thr Leu Asn Ile Thr Leu Arg Ser Tyr
            1140   1145

<210> 4900

<211> 300

<212> PRT

<213> Homo sapiens

<400> 4900

Met His Ser Leu Lys Lys Val Thr Phe Glu Asp Val Ala Ile Asp Phe
    1   5   10   15

Thr Gln Glu Glu Trp Ala Met Met Asp Thr Ser Lys Arg Lys Leu Tyr
            20   25   30

Arg Asp Val Met Leu Glu Asn Ile Ser His Leu Val Ser Leu Gly Tyr
            35   40   45

Gln Ile Ser Lys Ser Tyr Ile Ile Leu Gln Leu Glu Gln Gly Lys Glu
        50   55   60

Leu Trp Arg Glu Gly Arg Glu Phe Leu Gln Asp Gln Asn Pro Asp Arg
65   70   75   80

Glu Ser Ala Leu Lys Lys Lys His Met Ile Ser Met His Pro Ile Thr
                85   90   95

Arg Lys Asp Ala Ser Thr Ser Met Thr Met Glu Asn Ser Leu Ile Leu
            100   105   110

Glu Asp Pro Phe Glu Cys Asn Asp Ser Gly Glu Asp Cys Thr His Ser
            115   120   125

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Ser Thr Ile Thr Gln Arg Leu Leu Thr His Ser Gly Lys Lys Pro Tyr
    130                 135                 140
Val Ser Lys Gln Cys Gly Lys Ser Leu Arg Asn Leu Phe Ser Pro Lys
145                 150                 155                 160
Pro His Lys Gln Ile His Thr Lys Gly Lys Ser Tyr Gln Cys Asn Leu
                165                 170                 175
Cys Glu Lys Ala Tyr Thr Asn Cys Phe Arg Leu Arg Arg His Lys Met
                180                 185                 190
Thr His Thr Gly Glu Arg Pro Tyr Ala Cys His Leu Cys Gly Lys Ala
            195                 200                 205
Phe Thr Gln Cys Ser His Leu Arg Arg His Glu Lys Thr His Thr Gly
    210                 215                 220
Glu Arg Pro Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser
225   ·             230                 235                 240
Phe Asn Leu Arg Arg His Glu Arg Thr His Leu Gly Lys Lys Cys Tyr
                245                 250                 255
Glu Cys Asp Lys Ser Gly Lys Ala Phe Ser Gln Ser Ser Gly Phe Arg
                260                 265                 270
Gly Asn Lys Ile Ile His Thr Gly Glu Lys Pro His Ala Cys Leu Leu
                275                 280                 285
Cys Gly Lys Ala Phe Ser Leu Ser Ser Asp Leu Arg
                290                 295                 300
```

<210> 4901

<211> 1216

<212> PRT

<213> Homo sapiens

<400> 4901

```
Met Ser Gln Ala Gly Asp Val Glu Gly Pro Ser Thr Gly Asp Pro Val
 1                 5                 10                 15
Leu Ser Pro Gln His Asn Cys Glu Leu Leu Gln Asn Met Glu Gly Ala
                20                 25                 30
Ser Ser Met Pro Gly Leu Ser Pro Asp Gly Pro Gly Ala Ser Ser Gly
            35                 40                 45
```

Pro Gly Val Arg Ala Gly Ser Arg Arg Lys Ile Pro Arg Lys Glu Ala
    50   55   60

Leu Arg Gly Gly Ser Ser Arg Ala Ala Gly Ala Ala Glu Val Arg Pro
65   70   75   80

Gly Val Leu Glu Leu Leu Ala Val Val Gln Ser Arg Gly Ser Met Leu
           85   90   95

Ala Pro Gly Leu His Met Gln Leu Pro Ser Val Pro Thr Gln Gly Arg
         100   105   110

Ala Leu Thr Ser Lys Arg Leu Gln Val Ser Leu Cys Asp Ile Leu Asp
         115   120   125

Asp Ser Cys Pro Arg Lys Leu Cys Ser Arg Ser Ala Gly Leu Pro Glu
         130   135   140

Arg Ala Leu Ala Cys Arg Glu Arg Leu Ala Gly Val Glu Glu Val Ser
145   150   155   160

Cys Leu Arg Pro Arg Glu Ala Arg Asp Gly Gly Met Ser Ser Pro Gly
         165   170   175

Cys Asp Arg Arg Ser Pro Thr Leu Ser Lys Glu Glu Pro Pro Gly Arg
         180   185   190

Pro Leu Thr Ser Ser Pro Asp Pro Val Pro Val Arg Val Arg Lys Lys
         195   200   205

Trp Arg Arg Gln Gly Ala His Ser Glu Cys Glu Glu Gly Ala Gly Asp
         210   215   220

Phe Leu Trp Leu Asp Gln Ser Pro Arg Gly Asp Asn Leu Leu Ser Val
225   230   235   240

Gly Asp Pro Pro Gln Val Ala Asp Leu Glu Ser Leu Gly Gly Pro Cys
         245   250   255

Arg Pro Pro Ser Pro Lys Asp Thr Gly Ser Gly Pro Gly Glu Pro Gly
         260   265   270

Gly Ser Gly Ala Gly Cys Ala Ser Gly Thr Glu Lys Phe Gly Tyr Leu
         275   280   285

Pro Ala Thr Gly Asp Gly Pro Gln Pro Gly Ser Pro Cys Gly Pro Val
         290   295   300

Gly Phe Pro Val Pro Ser Gly Gly Glu Ser Leu Ser Ser Ala Ala Gln
305   310   315   320

Ala Pro Pro Gln Ser Ala Ala Leu Cys Leu Gly Ala Ser Ala Gln Ala
         325   330   335

Ser Ala Glu Gln Gln Glu Ala Val Cys Val Val Arg Thr Gly Ser Asp
            340   345   350

Glu Gly Gln Ala Pro Ala Gln Asp Gln Glu Glu Leu Glu Ala Lys Ala
            355   360   365

Gln Pro Ala Ser Arg Gly Arg Leu Glu Gln Gly Leu Ala Ala Pro Ala
        370   375   380

Asp Thr Cys Ala Ser Ser Arg Glu Pro Leu Gly Gly Leu Ser Ser Ser

385   390   395   400

Leu Asp Thr Glu Ala Ser Arg Ala Cys Ser Gly Pro Phe Met Glu Gln
            405   410   415

Arg Arg Ser Lys Gly Thr Lys Asn Leu Lys Lys Gly Pro Val Pro Cys
            420   425   430

Ala Gln Asp Arg Gly Thr Asp Arg Ser Ser Asp Asn Ser His Gln Asp
            435   440   445

Arg Pro Glu Glu Pro Ser Pro Gly Gly Cys Pro Arg Leu Glu Glu Val
        450   455   460

Lys Ile Pro His Gly Val Lys Leu Val Cys Tyr Leu Gly Ser Gly Pro
465   470   475   480

Val Ile Gln Leu Leu Gly Ala Ile Ser His Gly Gln Ala Gly Gly Gln
            485   490   495

Leu Pro Pro Lys Leu Glu Val Leu Glu Asp Leu Met Glu Val Ser Ser
            500   505   510

Pro Ser Pro Ala Gln Arg Leu Arg Arg Lys Lys Arg Pro Met Val Gln
            515   520   525

Gly Pro Ala Gly Cys Gln Val Phe Gln Pro Ser Pro Ser Gly Gly Thr
            530   535   540

Ala Gly Asp Pro Gly Gly Leu Ser Asp Pro Phe Tyr Pro Pro Arg Ser
545   550   555   560

Gly Ser Leu Ala Leu Gly Asp Pro Ser Ser Asp Pro Ala Cys Ser Gln
            565   570   575

Ser Gly Pro Met Glu Ala Glu Glu Asp Ser Leu Pro Glu Gln Pro Glu
            580   585   590

Asp Ser Ala Gln Leu Gln Gln Glu Lys Pro Ser Leu Tyr Ile Gly Val
            595   600   605

Arg Gly Thr Val Val Arg Ser Met Gln Glu Val Leu Trp Thr Arg Leu

```
            610                    615                    620
Arg Glu Leu Pro Asp Pro Val Leu Ser Glu Glu Val Val Glu Gly Ile
625                    630                    635                    640
Ala Ala Gly Ile Glu Ala Ala Leu Trp Asp Leu Thr Gln Gly Thr Asn
                    645                    650                    655
Gly Arg Tyr Lys Thr Lys Tyr Arg Ser Leu Leu Phe Asn Leu Arg Asp
                    660                    665                    670
Pro Arg Asn Leu Asp Leu Phe Leu Lys Val Val His Gly Asp Val Thr
                    675                    680                    685
Pro Tyr Asp Leu Val Arg Met Ser Ser Met Gln Leu Ala Pro Gln Glu
                    690                    695                    700
Leu Ala Arg Trp Arg Asp Gln Glu Glu Lys Arg Gly Leu Asn Ile Ile
705                    710                    715                    720
Glu Gln Gln Gln Lys Glu Pro Cys Arg Leu Pro Ala Ser Lys Met Thr
                    725                    730                    735
His Lys Gly Glu Val Glu Ile Gln Arg Asp Met Asp Gln Thr Leu Thr
                    740                    745                    750
Leu Glu Asp Leu Val Gly Pro Gln Met Phe Met Asp Cys Ser Pro Gln
                    755                    760                    765
Ala Leu Pro Ile Ala Ser Glu Asp Thr Thr Gly Gln His Asp His His
                    770                    775                    780
Phe Leu Asp Pro Asn Cys His Ile Cys Lys Asp Trp Glu Pro Ser Asn
785                    790                    795                    800
Glu Leu Leu Gly Ser Phe Glu Ala Ala Lys Ser Cys Gly Asp Asn Ile
                    805                    810                    815
Phe Gln Lys Ala Leu Ser Gln Thr Pro Met Pro Ala Pro Glu Met Pro
                    820                    825                    830
Lys Thr Arg Glu Leu Ser Pro Thr Glu Pro Gln Asp Arg Val Pro Pro
                    835                    840                    845
Ser Gly Leu His Val Pro Ala Ala Pro Thr Lys Ala Leu Pro Cys Leu
                    850                    855                    860
Pro Pro Trp Glu Gly Val Leu Asp Met Phe Ser Ile Lys Arg Phe Arg
865                    870                    875                    880
Ala Arg Ala Gln Leu Val Ser Gly His Ser Cys Arg Leu Val Gln Ala
                    885                    890                    895
Leu Pro Thr Val Ile Arg Ser Ala Gly Cys Ile Pro Ser Asn Ile Val
```

```
              900                  905                  910
Trp Asp Leu Leu Ala Ser Ile Cys Pro Ala Lys Ala Lys Asp Val Cys
         915                  920                  925
Val Val Arg Leu Cys Pro His Gly Ala Arg Asp Thr Gln Asn Cys Arg
     930                  935                  940
Leu Leu Tyr Ser Tyr Leu Asn Asp Arg Gln Arg His Gly Leu Ala Ser
945                  950                  955                  960
Val Glu His Met Gly Met Val Leu Leu Pro Leu Pro Ala Phe Gln Pro
                 965                  970                  975
Leu Pro Thr Arg Leu Arg Pro Leu Gly Gly Pro Gly Leu Trp Ala Leu
                 980                  985                  990
Pro Val Ser Pro Leu Leu Ser Pro Gly Leu Glu Val Thr His Ser Ser
         995                  1000                 1005
Leu Leu Leu Ala Val Leu Leu Pro Lys Glu Gly Leu Pro Asp Thr Ala
    1010                 1015                 1020
Gly Ser Ser Pro Trp Leu Gly Lys Val Gln Lys Met Val Ser Phe Asn
1025                 1030                 1035                 1040
Ser Lys Val Glu Lys Arg Tyr Tyr Gln Pro Asp Asp Arg Arg Pro Asn
                 1045                 1050                 1055
Val Pro Leu Lys Gly Thr Pro Pro Pro Gly Gly Ala Trp Gln Gln Ser
                 1060                 1065                 1070
Gln Gly Arg Gly Ser Ile Ala Pro Arg Gly Ile Ser Ala Trp Gln Arg
             1075                 1080                 1085
Pro Pro Arg Gly Arg Gly Arg Leu Trp Pro Glu Pro Glu Asn Trp Gln
    1090                 1095                 1100
His Pro Gly Arg Gly Gln Trp Pro Pro Glu Pro Gly Leu Arg Gln Ser
1105                 1110                 1115                 1120
Gln His Pro Tyr Ser Val Ala Pro Ala Gly His Gly Phe Gly Arg Gly
             1125                 1130                 1135
Gln His Phe His Arg Asp Ser Cys Pro His Gln Ala Leu Leu Arg His
             1140                 1145                 1150
Leu Glu Ser Leu Ala Thr Met Ser His Gln Leu Gln Ala Leu Leu Cys
         1155                 1160                 1165
Pro Gln Thr Lys Ser Ser Ile Pro Arg Pro Leu Gln Arg Leu Ser Ser
    1170                 1175                 1180
Ala Leu Ala Ala Pro Glu Pro Pro Gly Pro Ala Arg Asp Ser Ser Leu
```

<pre>
1185   1190   1195   1200
Gly Pro Thr Asp Glu Ala Gly Ser Glu Cys Pro Phe Pro Arg Lys Ala
                1205   1210   1215
</pre>

<210> 4902

<211> 435

<212> PRT

<213> Homo sapiens

<400> 4902

<pre>
Met Arg Lys Leu Leu Thr Asn Leu Pro Ala Ala Ala Val Leu Ser Ala
 1   5   10   15
Gln Val Tyr Ser Ala Val Leu Arg Gly Leu Trp Glu Glu Asn Val Cys
                20   25   30
Gly Thr Pro Gly Arg Thr Arg Val Cys Thr Ala Leu Leu Tyr Gly Gln
             35   40   45
Val Cys Pro Phe Gln Asp Ser Thr Asp Gly Leu Arg Thr Ile Thr Ser
          50   55   60
Ile Leu Phe Asn Trp Pro Pro Glu Asn Thr Ser Val Tyr Tyr Gln Pro
 65   70   75   80
Pro Gln Arg Ser Ser Phe Arg Ile Lys Leu Ala Phe Arg Asn Leu Ser
                85   90   95
Trp Pro Gly Leu Gly Leu Glu Asp His Gln Glu Ile Val Leu Gly Gln
                100   105   110
Leu Val Leu Pro Glu Pro Asn Glu Ala Lys Pro Asp Asp Pro Ala Pro
             115   120   125
Arg Pro Gly Gln His Ala Leu Thr Met Pro Ala Leu Glu Pro Ala Pro
          130   135   140
Pro Leu Leu Ala Asp Leu Gly Pro Ala Leu Glu Pro Glu Ser Pro Ala
145   150   155   160
Ala Leu Gly Pro Pro Gly Tyr Leu His Ser Ala Pro Gly Pro Ala Pro
                165   170   175
Ala Pro Gly Glu Glu Pro Pro Pro Gly Thr Val Leu Glu Pro Gln Ser
                180   185   190
Ala Pro Glu Ser Ser Cys Pro Cys Arg Gly Ser Val Lys Asn Gln Pro
</pre>

```
            195                 200                 205
Ser Glu Glu Leu Pro Asp Met Thr Thr Phe Pro Pro Arg Leu Leu Ala
        210                 215                 220
Glu Gln Leu Thr Leu Met Asp Ala Glu Leu Phe Lys Lys Val Val Leu
225                 230                 235                 240
Tyr Glu Cys Leu Gly Cys Ile Trp Gly Gln Gly His Leu Lys Gly Asn
                245                 250                 255
Glu His Met Ala Pro Thr Val Arg Ala Thr Ile Ala His Phe Asn Arg
                260                 265                 270
Leu Thr Asn Cys Ile Thr Thr Ser Cys Leu Gly Asp His Ser Met Arg
                275                 280                 285
Ala Arg Asp Arg Ala Arg Val Val Glu His Trp Ile Lys Val Ala Arg
        290                 295                 300
Glu Cys Leu Ser Leu Asn Asn Phe Ser Ser Val His Val Ile Val Ser
305                 310                 315                 320
Ala Leu Cys Ser Asn Pro Ile Gly Gln Leu His Lys Thr Trp Ala Gly
                325                 330                 335
Val Ser Ser Lys Ser Met Lys Glu Leu Lys Glu Leu Cys Lys Lys Asp
                340                 345                 350
Thr Ala Val Lys Arg Asp Leu Leu Ile Lys Arg Asp Asp Gly Glu Asn
                355                 360                 365
Asn Gly Asn Ser Tyr Arg Lys Leu Ser Pro Gln Arg Pro Cys Glu Val
        370                 375                 380
Ala Val Val Cys Ile Thr Leu Tyr Arg Arg Gly Asn Ser Leu Arg Glu
385                 390                 395                 400
Ala Arg Leu Gln Asp Trp Val Thr His Thr Gly Ser Val Asp Leu Gly
                405                 410                 415
Gln Trp Arg Gly Ala Leu Arg Trp Pro Pro Arg Arg Gly Thr Pro Arg
                420                 425                 430
Glu Pro Arg
        435
```

                                .

<210> 4903

<211> 171

<212> PRT

<213> Homo sapiens

<400> 4903

Met Gly Lys Ser Glu Ile Lys Arg Thr Gly Gly Phe Gly Ser Thr Asn
1   5   10   15

Lys Gln Gly Lys Ala Ala Tyr Trp Val Asn Gln Ile Thr Asp Lys Cys
                20   25   30

Pro Thr Cys Glu Ile Thr Ile Gln Gly Lys Lys Phe Lys Gly Leu Val
            35   40   45

Asp Thr Arg Ala Asp Ile Ser Ile Ile Ser Leu Gln His Trp Pro Ser
        50   55   60

Thr Trp Pro Ile Gln Pro Thr Gln Phe Asn Ile Val Gly Val Gly Glu
65   70   75   80

Ala Pro Glu Val Tyr Gln Ser Ser Ser Val Leu Pro Cys Glu Gly Pro
                85   90   95

Asp Gly Gln Pro Glu Thr Ile Gln Pro Ile Ile Thr Ser Val Ser Ile
                100   105   110

Asn Leu Trp Gly Arg Asp Leu Leu Gln Gln Cys Arg Ala Gln Val Leu
                115   120   125

Ile Pro Glu Gln Leu Tyr Ser Pro Gln Ser Gln His Met Met His Glu
                130   135   140

Met Gly Tyr Val Pro Gly Met Gly Leu Gln Lys Asn Leu Gln Gly Leu
145   150   155   160

Lys Ser Ser Arg Gln Arg Leu Gly Asn Asn Phe
                165   170

<210> 4904
<211> 599
<212> PRT
<213> Homo sapiens

<400> 4904

Met Asp Pro Pro Met Asp Asp Gln Pro Gly Glu Lys Glu Leu Val Lys
1   5   10   15

Arg Ser Gln Leu Asp Gly Glu Gly Asp Gly Pro Leu Ser Asn Gln Leu

```
                20                      25                      30
Ser Ala Ser Ser Thr Ile Asn Pro Val Pro Leu Val Gly Leu Gln Lys
            35                      40                      45
Pro Glu Met Ser Leu Pro Val Lys Pro Gly Gln Gly Asp Ser Glu Ala
        50                      55                      60
Ser Ser Pro Phe Thr Pro Val Ala Asp Glu Asp Ser Val Val Phe Ser
65                      70                      75                      80
Lys Leu Thr Tyr Leu Gly Cys Ala Ser Val Asn Ala Pro Arg Ser Glu
                85                      90                      95
Val Glu Ala Leu Arg Met Met Ser Ile Leu Arg Ser Gln Cys Gln Ile
            100                     105                     110
Ser Leu Asp Val Thr Leu Ser Val Pro Asn Val Ser Glu Gly Ile Val
            115                     120                     125
Arg Leu Leu Asp Pro Gln Thr Asn Thr Glu Ile Ala Asn Tyr Pro Ile
        130                     135                     140
Tyr Lys Ile Leu Phe Cys Val Arg Gly His Asp Gly Thr Pro Glu Ser
145                     150                     155                     160
Asp Cys Phe Ala Phe Thr Glu Ser His Tyr Asn Ala Glu Leu Phe Arg
                165                     170                     175
Ile His Val Phe Arg Cys Glu Ile Gln Glu Ala Val Ser Arg Ile Leu
            180                     185                     190
Tyr Ser Phe Ala Thr Ala Phe Arg Arg Ser Ala Lys Gln Thr Pro Leu
            195                     200                     205
Ser Ala Thr Ala Ala Pro Gln Thr Pro Asp Ser Asp Ile Phe Thr Phe
        210                     215                     220
Ser Val Ser Leu Glu Ile Lys Glu Asp Asp Gly Lys Gly Tyr Phe Ser
225                     230                     235                     240
Ala Val Pro Lys Asp Lys Asp Arg Gln Cys Phe Lys Leu Arg Gln Gly
                245                     250                     255
Ile Asp Lys Lys Ile Val Ile Tyr Val Gln Gln Thr Thr Asn Lys Glu
            260                     265                     270
Leu Ala Ile Glu Arg Cys Phe Gly Leu Leu Leu Ser Pro Gly Lys Asp
        275                     280                     285
Val Arg Asn Ser Asp Met His Leu Leu Asp Leu Glu Ser Met Gly Lys
        290                     295                     300
```

Ser Ser Asp Gly Lys Ser Tyr Val Ile Thr Gly Ser Trp Asn Pro Lys
305   310   315   320

Ser Pro His Phe Gln Val Val Asn Glu Glu Thr Pro Lys Asp Lys Val
                   325   330   335

Leu Phe Met Thr Thr Ala Val Asp Leu Val Ile Thr Glu Val Gln Glu
                   340   345   350

Pro Val Arg Phe Leu Leu Glu Thr Lys Val Arg Val Cys Ser Pro Asn
              355   360   365

Glu Arg Leu Phe Trp Pro Phe Ser Lys Arg Ser Thr Thr Glu Asn Phe
          370   375   380

Phe Leu Lys Leu Lys Gln Ile Lys Gln Arg Glu Arg Lys Asn Asn Thr
385   390   395   400

Asp Thr Leu Tyr Glu Val Val Cys Leu Glu Ser Glu Ser Glu Arg Glu
                   405   410   415

Arg Arg Lys Thr Thr Ala Ser Pro Ser Val Arg Leu Pro Gln Ser Gly
              420   425   430

Ser Gln Ser Ser Val Ile Pro Ser Pro Pro Glu Asp Asp Glu Glu Glu
          435   440   445

Asp Asn Asp Glu Pro Leu Leu Ser Gly Ser Gly Asp Val Ser Lys Glu
          450   455   460

Cys Ala Glu Lys Ile Leu Glu Thr Trp Gly Glu Leu Leu Ser Lys Trp
465   470   475   480

His Leu Asn Leu Asn Val Arg Pro Lys Gln Leu Ser Ser Leu Val Arg
                   485   490   495

Asn Gly Val Pro Glu Ala Leu Arg Gly Glu Val Trp Gln Leu Leu Ala
              500   505   510

Gly Cys His Asn Asn Asp His Leu Val Glu Lys Tyr Arg Ile Leu Ile
          515   520   525

Thr Lys Glu Ser Pro Gln Asp Ser Ala Ile Thr Arg Asp Ile Asn Arg
          530   535   540

Thr Phe Pro Ala His Asp Tyr Phe Lys Asp Thr Gly Gly Asp Gly Gln
545   550   555   560

Asp Ser Leu Tyr Lys Ile Cys Lys Val Phe His Val Lys Lys Lys Lys
                   565   570   575

Asp Ser Ile Leu Ser Gly Gly Ser Thr Leu Lys Leu His Lys Lys Gln
              580   585   590

Leu Gln Ser Val Ile Cys Ile
      595

<210> 4905

<211> 1340

<212> PRT

<213> Homo sapiens

<400> 4905

Met Leu Arg Lys Gly Ala Asn Arg Tyr Leu Thr Val Lys Lys Lys Asp
1   5   10   15

Gly Ser Glu Thr Ala His Ala Met Met Thr Cys Asn Leu Thr His Asn
            20   25   30

Thr Lys His Ala Val Arg Ser Leu Ile Gln Arg Phe Pro Val Thr Asn
            35   40   45

Lys Glu Arg Thr Glu Leu Leu Pro Lys Thr Glu Arg Gly Asn Val Phe
        50   55   60

Ala Val Glu Ala Glu Asn Arg Glu Met Ser Lys Thr Ser Gly Arg Leu
65   70   75   80

Asn Asn Gly Ile Pro Gln Ile Pro Val Lys Arg Gly Glu Ser Glu Phe
                85   90   95

Asp Ser Phe Arg Gln Ser Leu Pro Val Phe Glu Lys Gln Glu Glu Ile
            100   105   110

Val Lys Ile Ile Lys Glu Asn Lys Val Val Leu Ile Val Gly Glu Thr
            115   120   125

Gly Ser Gly Lys Thr Thr Gln Ile Pro Gln Phe Leu Leu Asp Asp Cys
        130   135   140

Phe Lys Asn Gly Ile Pro Cys Arg Ile Phe Cys Thr Gln Pro Arg Arg
145   150   155   160

Leu Ala Ala Ile Ala Val Ala Glu Arg Val Ala Ala Glu Arg Arg Glu
                165   170   175

Arg Ile Gly Gln Thr Ile Gly Tyr Gln Ile Arg Leu Glu Ser Arg Val
            180   185   190

Ser Pro Lys Thr Leu Leu Thr Phe Cys Thr Asn Gly Val Leu Leu Arg
            195   200   205

Thr Leu Met Ala Gly Asp Ser Thr Leu Ser Thr Val Thr His Val Ile
    210   215   220

Val Asp Glu Val His Glu Arg Asp Arg Phe Ser Asp Phe Leu Leu Thr
225   230   235   240

Lys Leu Arg Asp Leu Leu Gln Lys His Pro Thr Leu Lys Leu Ile Leu
            245   250   255

Ser Ser Ala Ala Leu Asp Val Asn Leu Phe Ile Arg Tyr Phe Gly Ser
          260   265   270

Cys Pro Val Ile Tyr Ile Gln Gly Arg Pro Phe Glu Val Lys Glu Met
        275   280   285

Phe Leu Glu Asp Ile Leu Arg Thr Thr Gly Tyr Thr Asn Lys Glu Met
    290   295   300

Leu Lys Tyr Lys Lys Glu Lys Gln Gln Glu Glu Lys Gln Gln Thr Thr
305   310   315   320

Leu Thr Glu Trp Tyr Ser Ala Gln Glu Asn Ser Phe Lys Pro Glu Ser
        325   330   335

Gln Arg Gln Arg Thr Val Leu Asn Val Thr Asp Glu Tyr Asp Leu Leu
        340   345   350

Asp Asp Gly Gly Asp Ala Val Phe Ser Gln Leu Thr Glu Lys Asp Val
        355   360   365

Asn Cys Leu Glu Pro Trp Leu Ile Lys Glu Met Asp Ala Cys Leu Ser
    370   375   380

Asp Ile Trp Leu His Lys Asp Ile Asp Ala Phe Ala Gln Val Phe His
385   390   395   400

Leu Ile Leu Thr Glu Asn Val Ser Val Asp Tyr Arg His Ser Glu Thr
        405   410   415

Ser Ala Thr Ala Leu Met Val Ala Ala Gly Arg Gly Phe Ala Ser Gln
        420   425   430

Val Glu Gln Leu Ile Ser Met Gly Ala Asn Val His Ser Lys Ala Ser
        435   440   445

Asn Gly Trp Met Ala Leu Asp Trp Ala Lys His Phe Gly Gln Thr Glu
    450   455   460

Ile Val Asp Leu Leu Glu Ser Tyr Ser Ala Ser Leu Glu Phe Gly Asn
465   470   475   480

Leu Asp Glu Ser Ser Leu Val Gln Thr Asn Gly Ser Asp Leu Ser Ala
        485   490   495

Glu Asp Arg Glu Leu Leu Lys Ala Tyr His His Ser Phe Asp Asp Glu
           500   505   510

Lys Val Asp Leu Asp Leu Ile Met His Leu Leu Tyr Asn Ile Cys His
           515   520   525

Ser Cys Asp Ala Gly Ala Val Leu Ile Phe Leu Pro Gly Tyr Asp Glu
           530   535   540

Ile Val Gly Leu Arg Asp Arg Ile Leu Phe Asp Asp Lys Arg Phe Ala
545   550   555   560

Asp Asn Thr His Arg Tyr Gln Val Phe Met Leu His Ser Asn Met Gln
               565   570   575

Thr Ser Asp Gln Lys Lys Val Leu Lys Asn Pro Pro Ala Gly Val Arg
           580   585   590

Lys Ile Ile Leu Ser Thr Asn Ile Ala Glu Thr Ser Ile Thr Val Asn
           595   600   605

Asp Val Val Phe Val Ile Asp Ser Gly Lys Val Lys Glu Lys Ser Phe
           610   615   620

Asp Ala Leu Asn Phe Val Thr Met Leu Lys Met Val Trp Ile Ser Lys
625   630   635   640

Ala Ser Ala Ile Gln Arg Lys Gly Arg Ala Gly Arg Cys Arg Pro Gly
           645   650   655

Ile Cys Phe Arg Leu Phe Ser Arg Leu Arg Phe Gln Asn Met Leu Glu
           660   665   670

Phe Gln Thr Pro Glu Leu Leu Arg Met Pro Leu Gln Glu Leu Cys Leu
           675   680   685

His Thr Lys Leu Leu Ala Pro Val Asn Cys Pro Ile Ala Asp Phe Leu
           690   695   700

Met Lys Ala Pro Glu Pro Pro Ala Leu Ile Val Arg Asn Ala Val
705   710   715   720

Gln Met Leu Lys Thr Ile Asp Ala Met Asp Thr Trp Glu Asp Leu Thr
               725   730   735

Glu Leu Gly Tyr His Leu Ala Asp Leu Pro Val Glu Pro His Leu Gly
           740   745   750

Lys Met Val Leu Cys Ala Val Val Leu Lys Cys Leu Asp Pro Ile Leu
           755   760   765

Thr Ile Ala Cys Thr Leu Ala Tyr Arg Asp Pro Phe Val Leu Pro Thr
           770   775   780

Gln Ala Ser Gln Lys Arg Ala Ala Met Leu Cys Arg Lys Arg Phe Thr
785   790   795   800

Ala Gly Ala Phe Ser Asp His Met Ala Leu Leu Arg Ala Phe Gln Ala
          805   810   815

Trp Gln Lys Ala Arg Ser Asp Gly Trp Glu Arg Ala Phe Cys Glu Lys
          820   825   830

Asn Phe Leu Ser Gln Ala Thr Met Glu Ile Ile Ile Gly Met Arg Thr
          835   840   845

Gln Leu Leu Gly Gln Leu Arg Ala Ser Gly Phe Val Arg Ala Arg Gly
    850   855   860

Gly Gly Asp Ile Arg Asp Val Asn Thr Asn Ser Glu Asn Trp Ala Val
865   870   875   880

Val Lys Ala Ala Leu Val Ala Gly Met Tyr Pro Asn Leu Val His Val
          885   890   895

Asp Arg Glu Asn Leu Val Leu Thr Gly Pro Lys Glu Lys Lys Val Arg
          900   905   910

Phe His Pro Ala Ser Val Leu Ser Gln Pro Gln Tyr Lys Lys Ile Pro
    915   920   925

Pro Ala Asn Gly Gln Ala Ala Ala Ile Lys Ala Leu Pro Thr Asp Trp
    930   935   940

Leu Ile Tyr Asp Glu Met Thr Arg Ala His Arg Ile Ala Asn Ile Arg
945   950   955   960

Cys Cys Ser Ala Val Thr Pro Val Thr Ile Leu Val Phe Cys Gly Pro
          965   970   975

Ala Arg Leu Ala Ser Asn Ala Leu Gln Glu Pro Ser Ser Phe Arg Val
          980   985   990

Asp Gly Ile Pro Asn Asp Ser Ser Asp Ser Glu Met Glu Asp Lys Thr
          995   1000   1005

Thr Ala Asn Leu Ala Ala Leu Lys Leu Asp Glu Trp Leu His Phe Thr
    1010   1015   1020

Leu Glu Pro Glu Ala Ala Ser Leu Leu Leu Gln Leu Arg Gln Lys Trp
1025   1030   1035   1040

His Ser Leu Phe Leu Arg Arg Met Arg Ala Pro Ser Lys Pro Trp Ser
          1045   1050   1055

Gln Val Asp Glu Ala Thr Ile Arg Ala Ile Ile Ala Val Leu Ser Thr
          1060   1065   1070

Glu Glu Gln Ser Ala Gly Leu Gln Gln Pro Ser Gly Ile Gly Gln Arg
          1075   1080   1085

Pro Arg Pro Met Ser Ser Glu Glu Leu Pro Leu Ala Ser Ser Trp Arg
        1090   1095   1100

Ser Asn Asn Ser Arg Lys Ser Ser Ala Asp Thr Glu Phe Ser Asp Glu
1105   1110   1115   1120

Cys Thr Thr Ala Glu Arg Val Leu Met Lys Ser Pro Ser Pro Ala Leu
              1125   1130   1135

His Pro Pro Gln Lys Tyr Lys Asp Arg Gly Ile Leu His Pro Lys Arg
          1140   1145   1150

Gly Thr Glu Asp Arg Ser Asp Gln Ser Ser Leu Lys Ser Thr Asp Ser
          1155   1160   1165

Ser Ser Tyr Pro Ser Pro Cys Ala Ser Pro Ser Pro Pro Ser Ser Gly
        1170   1175   1180

Lys Gly Ser Lys Ser Pro Ser Pro Arg Pro Asn Met Pro Val Arg Tyr
1185   1190   1195   1200

Phe Ile Met Lys Ser Ser Asn Leu Arg Asn Leu Glu Ile Ser Gln Gln
              1205   1210   1215

Lys Gly Ile Trp Ser Thr Thr Pro Ser Asn Glu Arg Lys Leu Asn Arg
          1220   1225   1230

Ala Phe Trp Glu Ser Ser Ile Val Tyr Leu Val Phe Ser Val Gln Gly
          1235   1240   1245

Ser Gly His Phe Gln Gly Phe Ser Arg Met Ser Ser Glu Ile Gly Arg
        1250   1255   1260

Glu Lys Ser Gln Asp Trp Gly Ser Ala Gly Leu Gly Gly Val Phe Lys
1265   1270   1275   1280

Val Glu Trp Ile Arg Lys Glu Ser Leu Pro Phe Gln Phe Ala His His
          1285   1290   1295

Leu Leu Asn Pro Trp Asn Asp Asn Lys Lys Val Gln Ile Ser Arg Asp
          1300   1305   1310

Gly Gln Glu Leu Glu Pro Gln Val Gly Glu Gln Leu Leu Gln Leu Trp
        1315   1320   1325

Glu Arg Leu Pro Leu Gly Glu Lys Asn Thr Thr Asp
        1330   1335   1340

<210> 4906

<211> 574

<212> PRT

<213> Homo sapiens

<400> 4906

Met Thr Ala Gly Ser Val Cys Val Pro Gln Ile Ile Pro Leu Arg Val
1   5   10   15

Pro Gln Pro Gly Lys Ala Asn His Glu Ile Asp Asn Asn Thr Leu Leu
                    20   25   30

Glu Met Lys Ser Asp Thr Pro Asp Val Asn Ile Tyr Tyr Thr Leu Asp
                35   40   45

Gly Ser Lys Pro Glu Phe Leu Lys Arg Ile Gly Tyr Gly Glu Asn Asn
            50   55   60

Thr Phe Lys Tyr Ile Lys Pro Ile Thr Leu Pro Asp Gly Lys Ile Gln
65   70   75   80

Val Lys Ala Ile Ala Val Ser Lys Asp Cys Arg Gln Ser Gly Ile Val
                85   90   95

Thr Lys Val Phe His Val Asp Tyr Glu Pro Pro Asn Ile Val Ser Pro
                100   105   110

Glu Asp Asn Val Glu Asn Val Leu Lys Asp Ser Ser Arg Gln Glu Phe
                115   120   125

Lys Asn Gly Phe Val Gly Ser Lys Leu Lys Lys Lys Tyr Lys Asn Ser
            130   135   140

Glu Asn Gln Arg Ser Trp Asn Val Asn Leu Arg Lys Phe Pro Glu Ser
145   150   155   160

Pro Leu Glu Ile Pro Ala Tyr Gly Gly Gly Ser Gly Ser Arg Pro Pro
                165   170   175

Thr Arg Gln Ser Gln Ser Pro Gly Phe Ala His Val Ser Gly Gln Lys
                180   185   190

Cys Leu Thr Ser Thr Glu Ile Met Arg Ile Gln Arg Glu Thr Asp Phe
                195   200   205

Leu Lys Cys Ala His Cys Leu Ala Pro Arg Pro Ser Asp Pro Phe Ala
            210   215   220

Arg Phe Cys Gln Glu Cys Gly Ser Pro Val Pro Pro Ile Phe Gly Cys
225   230   235   240

Arg Leu Pro Pro Pro Glu Gly Ala Gln Met Gly Leu Cys Ala Glu Cys
            245   250   255

Arg Ser Leu Val Pro Met Asn Thr Pro Ile Cys Val Val Cys Glu Ala
            260   265   270

Pro Leu Ala Leu Gln Leu Gln Pro Gln Ala Ser Leu His Leu Lys Glu
        275   280   285

Lys Val Ile Cys Arg Ala Cys Gly Thr Gly Asn Pro Ala His Leu Arg
        290   295   300

Tyr Cys Val Thr Cys Glu Gly Ala Leu Pro Ser Ser Gln Glu Ser Met
305   310   315   320

Cys Ser Gly Asp Lys Ala Pro Pro Pro Thr Gln Lys Gly Gly Thr
         325   330   335

Ile Ser Cys Tyr Arg Cys Gly Arg Trp Asn Leu Trp Glu Ala Ser Phe
         340   345   350

Cys Gly Trp Cys Gly Ala Met Leu Gly Ile Pro Ala Gly Cys Ser Val
        355   360   365

Cys Pro Lys Cys Gly Ala Ser Asn His Leu Ser Ala Arg Phe Cys Gly
        370   375   380

Ser Cys Gly Ile Cys Val Lys Ser Leu Val Lys Leu Ser Leu Asp Arg
385   390   395   400

Ser Leu Ala Leu Ala Ala Glu Glu Pro Arg Pro Phe Ser Glu Ser Leu
            405   410   415

Asn Ile Pro Leu Pro Arg Ser Asp Val Gly Thr Lys Arg Asp Ile Gly
         420   425   430

Thr Gln Thr Val Gly Leu Phe Tyr Pro Ser Gly Lys Leu Leu Ala Lys
        435   440   445

Lys Glu Gln Glu Leu Ala Ser Gln Lys Gln Arg Gln Glu Lys Met Ser
        450   455   460

Asp His Lys Pro Leu Leu Thr Ala Ile Ser Pro Gly Arg Gly Tyr Trp
465   470   475   480

Arg Arg Gln Leu Asp His Ile Ser Ala His Leu Arg Cys Tyr Ala Gln
            485   490   495

Asn Asn Pro Glu Phe Arg Ala Leu Ile Ala Glu Pro Arg Met Gly Lys
         500   505   510

Leu Ile Ser Ala Thr Val His Glu Asp Gly Cys Glu Val Ser Ile Arg

                515   520   525
Leu Asn Tyr Ser Gln Val Ser Asn Lys Val Arg Lys Leu Arg Leu Arg
        530   535   540
Glu Val Lys Gln Pro Ala Ser Ser Lys Gly Thr Lys Leu Val Ser Gly
545   550   555   560
Arg Pro Arg Ile His Thr Trp Gln Pro Glu Thr Phe Pro Ser
                        565   570

<210> 4907

<211> 534

<212> PRT

<213> Homo sapiens

<400> 4907

Met Gly Val Pro Thr Ala Val Ser Ala Thr Pro Val Arg Ala Asp Ala
  1   5   10   15
Ser Ser Lys Pro Gln Pro Leu Leu Gln Ser Gln Pro His Leu Phe Phe
                20   25   30
Phe Pro Lys Leu Leu Ser Arg Leu Leu Gly Ser Pro Leu Pro Val His
                35   40   45
Ser Ala Gly Pro Gly Pro Leu Leu Thr Arg Met Pro Gln Ala Thr Thr
        50   55   60
Val Ser Leu Arg Leu Gly Ser Trp Ser Leu Thr Glu Asp Arg Asp Val
65   70   75   80
Ser Gly Glu Trp Pro Arg Ala Phe Pro Asp Thr Pro Pro Gly Met Thr
                85   90   95
Thr Ser Val Phe Pro Val Ala Asp Ala Cys His Ser Val Lys Ser Leu
                100   105   110
Gln Arg Gln Pro Gly Ala Ser Pro Ser Gln Glu Arg Lys Pro Thr Gly
                115   120   125
Val Ser Val Ile Tyr Trp Glu Arg Leu Leu Leu Gly Ser Arg Ser Asp
        130   135   140
Gln Ala Ser Ile Ser Leu Arg Leu Thr Ser Pro Leu Arg Pro Pro Lys
145   150   155   160
Ser Ser Arg Pro Arg Glu Lys Thr Phe Thr Glu Tyr Arg Val Pro Gly

```
                    165                    170                    175
Arg Gln Pro Arg Thr Pro Glu Arg Gln Lys Pro Cys Ala Gln Glu Val
            180                    185                    190
Pro Gly Arg Ala Phe Gly Asn Ala Ser Asp Leu Lys Ala Ala Ser Gly
            195                    200                    205
Gly Arg Asp Arg Arg Met Gly Ala Ala Trp Gln Glu Pro His Arg Leu
        210                    215                    220
Leu Gly Gly Gln Glu Pro Ser Thr Trp Asp Glu Leu Gly Glu Ala Leu
225                    230                    235                    240
His Ala Gly Glu Lys Ser Phe Glu Cys Arg Ala Cys Ser Lys Val Phe
                245                    250                    255
Val Lys Ser Ser Asp Leu Leu Lys His Leu Arg Thr His Thr Gly Glu
            260                    265                    270
Arg Pro Tyr Glu Cys Thr Gln Cys Gly Lys Ala Phe Ser Gln Thr Ser
            275                    280                    285
His Leu Thr Gln His Gln Arg Ile His Ser Gly Glu Thr Pro Tyr Ala
        290                    295                    300
Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu Val Arg
305                    310                    315                    320
His Gln Arg Ile His Thr Ala Glu Lys Ser Phe Arg Cys Ser Glu Cys
                325                    330                    335
Gly Lys Ala Phe Ser His Gly Ser Asn Leu Ser Gln His Arg Lys Ile
            340                    345                    350
His Ala Gly Gly Arg Pro Tyr Ala Cys Ala Gln Cys Gly Arg Arg Phe
            355                    360                    365
Cys Arg Asn Ser His Leu Ile Gln His Glu Arg Thr His Thr Gly Glu
        370                    375                    380
Lys Pro Phe Val Cys Ala Leu Arg Gly Ala Ala Phe Ser Gln Gly Ser
385                    390                    395                    400
Ser Leu Phe Leu His Gln Arg Val His Thr Gly Glu Lys Pro Phe Ala
                405                    410                    415
Cys Ala Gln Cys Gly Arg Ser Phe Ser Arg Ser Ser Asn Leu Thr Gln
            420                    425                    430
His Gln Leu Leu His Thr Gly Glu Arg Pro Phe Arg Cys Val Asp Cys
            435                    440                    445
Gly Lys Gly Phe Ala Lys Gly Ala Val Leu Leu Ser His Arg Arg Ile
```

```
          450                   455                   460
His Thr Gly Glu Lys Pro Phe Val Cys Thr Gln Cys Gly Arg Ala Phe
465                   470                   475                   480
Arg Glu Arg Pro Ala Leu Leu His His Gln Arg Ile His Thr Thr Glu
                  485                   490                   495
Lys Thr Asn Ala Ala Ala Pro Asp Cys Thr Pro Gly Pro Gly Phe Leu
                  500                   505                   510
Gln Gly His His Arg Lys Val Arg Arg Gly Gly Lys Pro Ser Pro Val
                  515                   520                   525
Leu Lys Pro Ala Lys Val
      530
```

<210> 4908

<211> 1300

<212> PRT

<213> Homo sapiens

<400> 4908

```
Met Pro Pro Asp Val Ile Arg Asp Ile Leu Glu Gly Val Leu Arg Leu
  1                   5                   10                  15
Met Gly Ile Phe Asp Thr Ser Trp Val Ser Met Lys Ser Phe Leu Ala
                  20                  25                  30
Lys Arg Gly Val Arg Glu Asp Ile Ala Thr Phe Asp Ala Arg Asn Ile
                  35                  40                  45
Ser Lys Glu Ile Arg Glu Ser Val Glu Glu Leu Leu Phe Lys Asn Lys
                  50                  55                  60
Gly Ser Phe Asp Pro Lys Asn Ala Lys Arg Ala Ser Thr Ala Ala Ala
65                  70                  75                  80
Pro Leu Ala Ala Trp Val Lys Ala Asn Ile Gln Tyr Ser His Val Leu
                  85                  90                  95
Glu Arg Ile His Pro Leu Glu Thr Glu Gln Ala Gly Leu Glu Ser Asn
                  100                 105                 110
Leu Lys Lys Thr Glu Asp Arg Lys Arg Lys Leu Glu Glu Leu Leu Asn
                  115                 120                 125
Ser Val Gly Gln Lys Val Ser Glu Leu Lys Glu Lys Phe Gln Ser Arg
```

```
            130                     135                     140
Thr Ser Glu Ala Ala Lys Leu Glu Ala Glu Val Ser Lys Ala Gln Glu
145                     150                     155                     160
Thr Ile Lys Ala Ala Glu Val Leu Ile Asn Gln Leu Asp Arg Glu His
                165                     170                     175
Lys Arg Trp Asn Ala Gln Val Val Glu Ile Thr Glu Glu Leu Ala Thr
                180                     185                     190
Leu Pro Lys Arg Ala Gln Leu Ala Ala Ala Phe Ile Thr Tyr Leu Ser
                195                     200                     205
Ala Ala Pro Glu Ser Leu Arg Lys Thr Cys Leu Glu Glu Trp Thr Lys
        210                     215                     220
Ser Ala Gly Leu Glu Lys Phe Asp Leu Arg Arg Phe Leu Cys Thr Glu
225                     230                     235                     240
Ser Glu Gln Leu Ile Trp Lys Ser Glu Gly Leu Pro Ser Asp Asp Leu
                245                     250                     255
Ser Ile Glu Asn Ala Leu Val Ile Leu Gln Ser Arg Val Cys Pro Phe
                260                     265                     270
Leu Ile Asp Pro Ser Ser Gln Ala Thr Glu Trp Leu Lys Thr His Leu
                275                     280                     285
Lys Asp Ser Arg Leu Glu Val Ile Asn Gln Gln Asp Ser Asn Phe Ile
                290                     295                     300
Thr Ala Leu Glu Leu Ala Val Arg Phe Gly Lys Thr Leu Ile Ile Gln
305                     310                     315                     320
Glu Met Asp Gly Val Glu Pro Val Leu Tyr Pro Leu Leu Arg Arg Asp
                325                     330                     335
Leu Val Ala Gln Gly Pro Arg Tyr Val Val Gln Ile Gly Asp Lys Ile
                340                     345                     350
Ile Asp Tyr Asn Glu Glu Phe Arg Leu Phe Leu Ser Thr Arg Asn Pro
                355                     360                     365
Asn Pro Phe Ile Pro Pro Asp Ala Ala Ser Ile Val Thr Glu Val Asn
                370                     375                     380
Phe Thr Thr Thr Arg Ser Gly Leu Arg Gly Gln Leu Leu Ala Leu Thr
385                     390                     395                     400
Ile Gln His Glu Lys Pro Asp Leu Glu Glu Gln Lys Thr Lys Leu Leu
                405                     410                     415
Gln Gln Glu Glu Asp Lys Lys Ile Gln Leu Ala Lys Leu Glu Glu Ser
```

```
                420                    425                    430
Leu Leu Glu Thr Leu Ala Thr Ser Gln Gly Asn Ile Leu Glu Asn Lys
            435                    440                    445
Asp Leu Ile Glu Ser Leu Asn Gln Thr Lys Ala Ser Ser Ala Leu Ile
        450                    455                    460
Gln Glu Ser Leu Lys Glu Ser Tyr Lys Leu Gln Ile Ser Leu Asp Gln
465                    470                    475                    480
Glu Arg Asp Ala Tyr Leu Pro Leu Ala Glu Ser Ala Ser Lys Met Tyr
                485                    490                    495
Phe Ile Ile Ser Asp Leu Ser Lys Ile Asn Asn Met Tyr Arg Phe Ser
                500                    505                    510
Leu Ala Ala Phe Leu Arg Leu Phe Gln Arg Ala Leu Gln Asn Lys Gln
            515                    520                    525
Asp Ser Glu Asn Thr Glu Gln Arg Ile Gln Ser Leu Ile Ser Ser Leu
        530                    535                    540
Gln His Met Val Tyr Glu Tyr Ile Cys Arg Cys Leu Phe Lys Ala Asp
545                    550                    555                    560
Gln Leu Met Phe Ala Leu His Phe Val Arg Gly Met His Pro Glu Leu
                565                    570                    575
Phe Gln Glu Asn Glu Trp Asp Thr Phe Thr Gly Val Val Val Gly Asp
                580                    585                    590
Met Leu Arg Lys Ala Asp Ser Gln Gln Lys Ile Arg Asp Gln Leu Pro
            595                    600                    605
Ser Trp Ile Asp Gln Glu Arg Ser Trp Ala Val Ala Thr Leu Lys Ile
        610                    615                     620
Ala Leu Pro Ser Leu Tyr Gln Thr Leu Cys Phe Glu Asp Ala Ala Leu
625                    630                    635                    640
Trp Arg Thr Tyr Tyr Asn Asn Ser Met Cys Glu Gln Glu Phe Pro Ser
                645                    650                    655
Ile Leu Ala Lys Lys Val Ser Leu Phe Gln Gln Ile Leu Val Val Gln
            660                    665                    670
Ala Leu Arg Pro Asp Arg Leu Gln Ser Ala Met Ala Leu Phe Ala Cys
            675                    680                    685
Lys Thr Leu Gly Leu Lys Glu Val Ser Pro Leu Pro Leu Asn Leu Lys
        690                    695                    700
Arg Leu Tyr Lys Glu Thr Leu Glu Ile Glu Pro Ile Leu Ile Ile Ile
```

```
        705                 710                 715                 720
Ser Pro Gly Ala Asp Pro Ser Gln Glu Leu Gln Glu Leu Ala Asn Ala
                    725                 730                 . 735
Glu Arg Ser Gly Glu Cys Tyr His Gln Val Ala Met Gly Gln Gly Gln
                    740                 745                 750
Ala Asp Leu Ala Ile Gln Met Leu Lys Glu Cys Ala Arg Asn Gly Asp
                755                 760                 765
Trp Leu Cys Leu Lys Asn Leu His Leu Val Val Ser Trp Leu Pro Val
            770                 775                 780
Leu Glu Lys Glu Leu Asn Thr Leu Gln Pro Lys Asp Thr Phe Arg Leu
785                 790                 795                 800
Trp Leu Thr Ala Glu Val His Pro Asn Phe Thr Pro Ile Leu Leu Gln
                    805                 810                 815
Ser Ser Leu Lys Ile Thr Tyr Glu Ser Pro Pro Gly Leu Lys Lys Asn
                820                 825                 830
Leu Met Arg Thr Tyr Glu Ser Trp Thr Pro Glu Gln Ile Ser Lys Lys
                835                 840                 845
Asp Asn Thr His Arg Ala His Ala Leu Phe Ser Leu Ala Trp Phe His
        850                 855                 860
Ala Ala Cys Gln Glu Arg Arg Asn Tyr Ile Pro Gln Gly Trp Thr Lys
865                 870                 875                 880
Phe Tyr Glu Phe Ser Leu Ser Asp Leu Arg Ala Gly Tyr Asn Ile Ile
                    885                 890                 895
Asp Arg Leu Phe Asp Gly Ala Lys Asp Val Gln Trp Glu Phe Val His
                900                 905                 .    910
Gly Leu Leu Glu Asn Ala Ile Tyr Gly Gly Arg Ile Asp Asn Tyr Phe
            915                 920                 925
Asp Leu Arg Val Leu Gln Ser Tyr Leu Lys Gln Phe Phe Asn Ser Ser
        930                 935                 940                 .
Val Ile Asp Val Phe Asn Gln Arg Asn Lys Lys Ser Ile Phe Pro Tyr
945                 950                 955                 960
Ser Val Ser Leu Pro Gln Ser Cys Ser Ile Leu Asp Tyr Arg Ala Val
                965                 970                 975
Ile Glu Lys Ile Pro Glu Asp Asp Lys Pro Ser Phe Phe Gly Leu Pro
                980                 985                 990
Ala Asn Ile Ala Arg Ser Ser Gln Arg Met Ile Ser Ser Gln Val Ile
```

```
            995                  1000                  1005
Ser Gln Leu Arg Ile Leu Gly Arg Ser Ile Thr Ala Gly Ser Lys Phe
       1010                1015                 1020
Asp Arg Glu Ile Trp Ser Asn Glu Leu Ser Pro Val Leu Asn Leu Trp
1025              1030                1035                  1040
Lys Lys Leu Asn Gln Asn Ser Asn Leu Ile His Gln Lys Val Pro Pro
                1045                 1050                1055
Pro Asn Asp Arg Gln Gly Ser Pro Ile Leu Ser Phe Ile Ile Leu Glu
            1060                1065                 1070
Gln Phe Asn Ala Ile Arg Leu Val Gln Ser Val His Gln Ser Leu Ala
           1075                1080                 1085
Ala Leu Ser Lys Val Ile Arg Gly Thr Thr Leu Leu Ser Ser Glu Val
       1090                1095                1100
Gln Lys Leu Ala Ser Ala Leu Leu Asn Gln Lys Cys Pro Leu Ala Trp
1105              1110                1115                  1120
Gln Ser Lys Trp Glu Gly Pro Glu Asp Pro Leu Gln Tyr Leu Arg Gly
                1125                1130                 1135
Leu Val Ala Arg Ala Leu Ala Ile Gln Asn Trp Val Asp Lys Ala Glu
            1140                1145                 1150
Lys Gln Ala Leu Leu Ser Glu Thr Leu Asp Leu Ser Glu Leu Phe His
           1155                1160                 1165
Pro Asp Thr Phe Leu Asn Ala Leu Arg Gln Glu Thr Ala Arg Ala Val
       1170                1175                 1180
Gly Arg Ser Val Asp Ser Leu Lys Phe Val Ala Ser Trp Lys Gly Arg
1185              1190                1195                  1200
Leu Gln Glu Ala Lys Leu Gln Ile Lys Ile Ser Gly Leu Leu Leu Glu
                1205                1210                 1215
Gly Cys Ser Phe Asp Gly Asn Gln Leu Ser Glu Asn Gln Leu Asp Ser
            1220                1225                 1230
Pro Ser Val Ser Ser Val Leu Pro Cys Phe Met Gly Trp Ile Pro Gln
           1235                1240                 1245
Asp Ala Cys Gly Pro Tyr Ser Pro Asp Glu Cys Ile Ser Leu Pro Val
       1250                1255                 1260
Tyr Thr Ser Ala Glu Arg Asp Arg Val Val Thr Asn Ile Asp Val Pro
1265              1270                1275                  1280
Cys Gly Gly Asn Gln Asp Gln Trp Ile Gln Cys Gly Ala Ala Leu Phe
```

```
            1285              1290              1295
Leu Lys Asn Gln
              1300


<210> 4909

<211> 944

<212> PRT

<213> Homo sapiens


<400> 4909
Met Gly Ser Asp Gly Ile Leu Arg Leu Ser Thr Ser Ala Leu Asn Asn
 1               5                  10                 15
Glu Phe Phe Ala Tyr Ala Ala Gln Gly Trp Lys Gln Arg Leu Ala Glu
                20                 25                 30
Gly Glu Phe Thr Pro Glu Met Gln Leu Arg Ile Arg Gln Glu Ile Glu
            35                 40                 45
Lys Glu Lys Lys Thr Glu Pro Trp Lys Glu Lys Phe Phe Glu Arg Phe
         50                 55                 60
Tyr Gly Glu Lys Leu Gly Met Ser Arg Glu Glu Ser Val Lys Leu Thr
 65                 70                 75                 80
Thr Gly Pro Asn Asn Ala Gly Ala Gln Ser Ser Ser Ser Cys Gly Thr
                85                 90                 95
Ser Gly Leu Pro Val Ser Ala Gln Thr Ala Leu Ala Glu Gln Gln Pro
            100                105                110
Lys Ser Met Lys Ser Pro Ala Ser Pro Glu Pro Gly Phe Cys Ala Thr
            115                120                125
Leu Cys Pro Met Val Glu Ile Pro Pro Lys Asp Ile Met Ala Glu Leu
        130                135                140
Glu Ser Glu Asp Ile Leu Ile Pro Glu Glu Ser Val Ile Gln Glu Glu
145                150                155                160
Ile Ala Glu Glu Val Glu Thr Ser Ile Cys Glu Cys Gln Asp Glu Asn
                165                170                175
His Lys Thr Ile Pro Glu Phe Ser Glu Glu Ala Glu Ser Leu Thr Asn
            180                185                190
Ser His Glu Glu Pro Gln Ile Ala Pro Pro Glu Asp Asn Leu Glu Ser
```

```
            195                 200                 205
Cys Val Met Met Asn Asp Val Leu Glu Thr Leu Pro His Ile Glu Val
        210                 215                 220
Lys Ile Glu Gly Lys Ser Glu Ser Pro Gln Glu Glu Met Thr Val Val


225                 230                 235                 240
Ile Asp Gln Leu Glu Val Cys Asp Ser Leu Ile Pro Ser Thr Ser Ser
                    245                 250                 255
Met Thr His Val Ser Asp Thr Glu His Lys Glu Ser Glu Thr Ala Val
                    260                 265                 270
Glu Thr Ser Thr Pro Lys Ile Lys Thr Gly Ser Ser Ser Leu Glu Gly
                    275                 280                 285
Gln Phe Pro Asn Glu Gly Ile Ala Ile Asp Met Glu Leu Gln Ser Asp
        290                 295                 300
Pro Glu Glu Gln Leu Ser Glu Asn Ala Cys Ile Ser Glu Thr Ser Phe
305                 310                 315                 320
Ser Ser Glu Ser Pro Glu Gly Ala Cys Thr Ser Leu Pro Ser Pro Gly
                    325                 330                 335
Gly Glu Thr Gln Ser Thr Ser Glu Glu Ser Cys Thr Pro Ala Ser Leu
                    340                 345                 350
Glu Thr Thr Phe Cys Ser Glu Val Ser Ser Thr Glu Asn Thr Asp Lys
                    355                 360                 365
Tyr Asn Gln Arg Asn Ser Thr Asp Glu Asn Phe His Ala Ser Leu Met
        370                 375                 380
Ser Glu Ile Ser Pro Ile Ser Thr Ser Pro Glu Ile Ser Glu Ala Ser
385                 390                 395                 400
Leu Met Ser Asn Leu Pro Leu Thr Ser Glu Ala Ser Pro Val Ser Asn
                    405                 410                 415
Leu Pro Leu Thr Ser Glu Thr Ser Pro Met Ser Asp Leu Pro Leu Thr
                    420                 425                 430
Ser Lys Thr Ser Ser Val Ser Ser Met Leu Leu Thr Ser Glu Thr Thr
                    435                 440                 445
Phe Val Ser Ser Leu Pro Leu Pro Ser Glu Thr Ser Pro Ile Ser Asn
        450                 455                 460
Ser Ser Ile Asn Glu Arg Met Ala His Gln Gln Arg Lys Ser Pro Ser
465                 470                 475                 480
```

Val Ser Glu Glu Pro Leu Ser Pro Gln Lys Asp Glu Ser Ser Ala Thr
              485   490   495

Ala Lys Pro Leu Gly Glu Asn Leu Thr Ser Gln Gln Lys Asn Leu Ser
          500   505   510

Asn Thr Pro Glu Pro Ile Ile Met Ser Ser Ser Ser Ile Ala Pro Glu
        515   520   525

Ala Phe Pro Ser Glu Asp Leu His Asn Lys Thr Leu Ser Gln Gln Thr
        530   535   540

Cys Lys Ser His Val Asp Thr Glu Lys Pro Tyr Pro Ala Ser Ile Pro
545   550   555   560

Glu Leu Ala Ser Thr Glu Met Ile Lys Val Lys Asn His Ser Val Leu
          565   570   575

Gln Arg Thr Glu Lys Lys Val Leu Pro Ser Pro Leu Glu Leu Ser Val
          580   585   590

Phe Ser Glu Gly Thr Asp Asn Lys Gly Asn Glu Leu Pro Ser Ala Lys
        595   600   605

Leu Gln Asp Lys Gln Tyr Ile Ser Ser Val Asp Lys Ala Pro Phe Ser
        610   615   620

Glu Gly Ser Arg Asn Lys Thr His Lys Gln Gly Ser Thr Gln Ser Arg
625   630   635   640

Leu Glu Thr Ser His Thr Ser Lys Ser Ser Glu Pro Ser Lys Ser Pro
              645   650   655

Asp Gly Ile Arg Asn Glu Ser Arg Asp Ser Glu Ile Ser Lys Arg Lys
          660   665   670

Thr Ala Glu Gln His Ser Phe Gly Ile Cys Lys Glu Lys Arg Ala Arg
        675   680   685

Ile Glu Asp Asp Gln Ser Thr Arg Asn Ile Ser Ser Ser Ser Pro Pro
        690   695   700

Glu Lys Glu Gln Pro Pro Arg Glu Glu Pro Arg Val Pro Pro Leu Lys
705   710   715   720

Ile Gln Leu Ser Lys Ile Gly Pro Pro Phe Ile Ile Lys Ser Gln Pro
              725   730   735

Val Ser Lys Pro Glu Ser Arg Ala Ser Thr Ser Thr Ser Val Ser Gly
          740   745   750

Gly Arg Asn Thr Gly Ala Arg Thr Leu Ala Asp Ile Lys Ala Arg Ala
        755   760   765

Gln Gln Ala Arg Ala Gln Arg Glu Ala Ala Ala Ala Ala Ala Val Ala
　　 770 　　　　　 775 　　　　　　 780

Ala Ala Ala Ser Ile Val Ser Gly Ala Met Gly Ser Pro Gly Glu Gly
785 　　　　　 790 　　　　　 795 　　　　　　 800

Gly Lys Thr Arg Thr Leu Ala His Ile Lys Glu Gln Thr Lys Ala Lys
　　　　　 805 　　　　　 810 　　　　　 815

Leu Phe Ala Lys His Gln Ala Arg Ala His Leu Phe Gln Thr Ser Lys
　　　　　 820 　　　　　 825 　　　　　 830

Glu Thr Arg Leu Pro Pro Pro Leu Ser Ser Lys Glu Gly Pro Pro Asn
　　　　　 835 　　　　　 840 　　　　　 845

Leu Glu Val Ser Ser Thr Pro Glu Thr Lys Met Glu Gly Ser Thr Gly
　　　 850 　　　　　 855 　　　　　 860

Val Ile Ile Val Asn Pro Asn Cys Arg Ser Pro Ser Asn Lys Ser Ala
865 　　　　　 870 　　　　　 875 　　　　　　 880

His Leu Arg Glu Thr Thr Thr Val Leu Gln Gln Ser Leu Asn Pro Ser
　　　　　 885 　　　　　 890 　　　　　 895

Lys Leu Pro Glu Thr Ala Thr Asp Leu Ser Val His Ser Ser Asp Glu
　　　　　 900 　　　　　 905 　　　　　 910

Asn Ile Pro Val Ser His Leu Ser Glu Lys Ile Val Ser Ser Thr Ser
　　　　　 915 　　　　　 920 　　　　　 925

Ser Glu Asn Ser Ser Val Pro Met Leu Phe Asn Lys Asn Ser Val Pro
　　　 930 　　　　　 935 　　　　　 940

<210> 4910

<211> 1161

<212> PRT

<213> Homo sapiens

<400> 4910

Met Cys Ser Thr Pro Gly Met Pro Ala Pro Gly Ala Ser Leu Ala Leu
1 　　　　　 5 　　　　　 10 　　　　　 15

Arg Val Ser Phe Val Asp Val His Pro Asp Val Ile Pro Val Gln Leu
　　　　　 20 　　　　　 25 　　　　　 30

Trp Gly Leu Val Gly Glu Arg Arg Gly Glu Tyr Leu Arg Leu Ser Arg
　　　 35 　　　　　 40 　　　　　 45

Glu Ile Gln Glu Ala Ala Ala Thr Arg Gly Gln Trp Ala Leu Gly Ser
            50   55   60

Ala Ser Ala Ser Pro Gly Glu Leu Cys Leu Val Gln Val Gly Leu Leu
65   70   ·75   80

Trp His Arg Cys Arg Val Val Ser Arg Gln Ala Gln Glu Ser Arg Val
                        85   90   95

Phe Leu Leu Asp Glu Gly Arg Thr Ile Thr Ala Gly Ala Gly Ser Leu
                        100   105   110

Ala Pro Gly Arg Arg Glu Phe Phe Asn Leu Pro Ser Glu Val Leu Gly
            115   120   125

Cys Val Leu Ala Gly Leu Val Pro Ala Gly Cys Gly Ala Gly Ser Gly
            130   135   140

Glu Pro Pro Gln His Trp Pro Ala Asp Ala Val Asp Phe Leu Ser Asn
145   150   155   160

Leu Gln Gly Lys Glu Val His Gly Cys Val Leu Asp Val Leu Leu Leu
                        165   170   175

His Arg Leu Val Leu Leu Glu Val Pro Asp Val Phe Gln Gln Met Arg
                        180   ·   185   190

Glu Leu Gly Leu Ala Arg Arg Val Pro Asp Ser Leu Phe Arg Ser Leu
            195   200   205

Leu Glu Arg Tyr Leu Thr Ala Ala Thr Ala Ser Val Gly Ser Gly Val
            210   215   220

Pro Val Leu Ser Arg Val Pro Leu Lys Gln Lys Gln Pro Gly Leu Asp
225   230   235   240

Tyr Phe Tyr Pro Gln Leu Gln Leu Gly Val Thr Glu Ala Val Val Ile
                        245   250   255

Thr Gln Val Cys His Pro His Arg Ile His Cys Gln Leu Arg Ser Val
                        260   265   270

Ser Gln Glu Ile His Arg Leu Ser Glu Ser Met Ala Gln Val Tyr Arg
            275   280   285

Gly Ser Thr Gly Thr Gly Asp Glu Asn Ser Thr Ser Ala Thr Trp Glu
            290   295   300

Glu Arg Glu Glu Ser Pro Asp Lys Pro Gly Ser Pro Cys Ala Ser Cys
305   310   315   320

Gly Leu Asp Gly His Trp Tyr Arg Ala Leu Leu Leu Glu Thr Phe Arg
                        325   330   335

```
Pro Gln Arg Cys Ala Gln Val Leu His Val Asp Tyr Gly Arg Lys Glu
            340                 345                 350

Leu Val Ser Cys Ser Ser Leu Arg Tyr Leu Leu Pro Glu Tyr Phe Arg
            355                 360                 365

Met Pro Val Val Thr Tyr Pro Cys Ala Leu Tyr Gly Leu Trp Asp Gly
    370                 375                 380

Gly Arg Gly Trp Ser Arg Ser Gln Val Gly Asp Leu Lys Thr Leu Ile
385                 390                 395                 400

Leu Gly Lys Ala Val Asn Ala Lys Ile Glu Phe Tyr Cys Ser Phe Glu
                405                 410                 415

His Val Tyr Tyr Val Ser Leu Tyr Gly Glu Asp Gly Ile Asn Leu Asn
            420                 425                 430

Arg Val Phe Gly Val Gln Ser Cys Cys Leu Ala Asp Arg Val Leu Gln
            435                 440                 445

Ser Gln Ala Thr Glu Glu Glu Pro Glu Thr Ser Gln Ser Gln Ser
    450                 455                 460

Pro Ala Glu Glu Val Asp Glu Glu Ile Ser Leu Pro Ala Leu Arg Ser
465                 470                 475                 480

Ile Arg Leu Lys Met Asn Ala Phe Tyr Asp Ala Gln Val Glu Phe Val
                485                 490                 495

Lys Asn Pro Ser Glu Phe Trp Ile Arg Leu Arg Lys His Asn Val Thr
                500                 505                 510

Phe Ser Lys Leu Met Arg Arg Met Cys Gly Phe Tyr Ser Ser Ala Ser
            515                 520                 525

Lys Leu Asp Gly Val Val Leu Lys Pro Glu Pro Asp Asp Leu Cys Cys
    530                 535                 540

Val Lys Trp Lys Glu Asn Gly Tyr Tyr Arg Ala Ile Val Thr Lys Leu
545                 550                 555                 560

Asp Asp Lys Ser Val Asp Val Phe Leu Val Asp Arg Gly Asn Ser Glu
                565                 570                 575

Asn Val Asp Trp Tyr Asp Val Arg Met Leu Leu Pro Gln Phe Arg Gln
            580                 585                 590

Leu Pro Ile Leu Ala Val Lys Cys Thr Leu Ala Asp Ile Trp Pro Leu
            595                 600                 605

Gly Lys Thr Trp Ser Gln Glu Ala Val Ser Phe Phe Lys Lys Thr Val
    610                 615                 620
```

Leu His Lys Glu Leu Val Ile His Ile Leu Asp Lys Gln Asp His Gln
625   630   635   640

Tyr Val Ile Glu Ile Leu Asp Glu Ser Arg Thr Gly Glu Glu Asn Ile
            645   650   655

Ser Lys Val Ile Ala Gln Ala Gly Tyr Ala Lys Tyr Gln Glu Phe Glu
            660   665   670

Thr Lys Glu Asn Ile Leu Val Asn Ala His Ser Pro Gly His Val Ser
            675   680   685

Asn His Phe Thr Thr Glu Ser Asn Lys Ile Pro Phe Ala Lys Thr Gly
      690   695   700

Glu Gly Glu Gln Lys Ala Lys Arg Glu Asn Lys Thr Thr Ser Val Ser
705   710   715   720

Lys Ala Leu Ser Asp Thr Thr Val Val Thr Asn Gly Ser Thr Glu Leu
            725   730   735

Val Val Gln Glu Lys Val Lys Arg Ala Ser Val Tyr Phe Pro Leu Met
            740   745   750

Gln Asn Cys Leu Glu Ile Lys Pro Gly Ser Ser Ser Lys Gly Glu Leu
            755   760   765

Glu Val Gly Ser Thr Val Glu Val Arg Val Ser Tyr Val Glu Asn Pro
            770   775   780

Gly Tyr Phe Trp Cys Gln Leu Thr Arg Asn Ile Gln Gly Leu Lys Thr
785   790   795   800

Leu Met Ser Asp Ile Gln Tyr Tyr Cys Lys Asn Thr Ala Ala Pro His
            805   810   815

Gln Arg Asn Thr Leu Ala Cys Leu Ala Lys Arg Thr Val Asn Arg Gln
            820   825   830

Trp Ser Arg Ala Leu Ile Ser Gly Ile Gln Ser Val Glu His Val Asn
            835   840   845

Val Thr Phe Val Asp Tyr Gly Asp Arg Glu Met Val Ser Val Lys Asn
            850   855   860

Ile Tyr Ser Ile Ser Glu Glu Phe Leu Lys Val Lys Ala Gln Ala Phe
865   870   875   880

Arg Cys Ser Leu Tyr Asn Leu Ile Gln Pro Val Gly Gln Asn Pro Phe
            885   890   895

Val Trp Asp Val Lys Ala Ile Gln Ala Phe Asn Glu Phe Ile Asp Asn
            900   905   910

Ala Trp Gln Lys Asn Leu Glu Leu Lys Cys Thr Ile Phe Ala Leu Ala
            915   920   925

Ser Ile Asn Glu Glu Leu Phe Asn Ile Val Asp Leu Leu Thr Pro Phe
            930   935   940

Gln Ser Ala Cys His Phe Leu Val Glu Lys Arg Leu Ala Arg Pro Val
945   950   955   960

Lys Leu Gln Lys Pro Leu Glu Ser Ser Val Gln Leu His Ser Tyr Phe
                965   970   975

Tyr Ser Thr His Asp Met Lys Ile Gly Ser Glu Glu Leu Val Tyr Ile
            980   985   990

Thr His Ile Asp Asp Pro Trp Thr Phe Tyr Cys Gln Leu Ala Arg Asn
            995   1000   1005

Ala Asn Ile Leu Glu Gln Leu Ser Cys Ser Ile Thr Gln Leu Ser Lys
            1010   1015   1020

Val Leu Leu Asn Leu Lys Thr Ser Pro Leu Asn Pro Gly Thr Leu Cys
1025   1030   1035   1040

Leu Ala Lys Tyr Thr Asp Gly Asn Trp Tyr Arg Gly Ile Val Ile Glu
            1045   1050   1055

Lys Glu Pro Lys Lys Val Phe Phe Val Asp Phe Gly Asn Ile Tyr Val
            1060   1065   1070

Val Thr Ser Asp Asp Leu Leu Pro Ile Pro Ser Asp Ala Tyr Asp Val
            1075   1080   1085

Leu Leu Leu Pro Met Gln Ala Val Arg Cys Ser Leu Ser Asp Ile Pro
            1090   1095   1100

Asp His Ile Pro Glu Glu Val Val Val Trp Phe Gln Glu Thr Ile Leu
1105   1110   1115   1120

Asp Lys Ser Leu Lys Ala Leu Val Val Ala Lys Asp Pro Asp Gly Thr
                1125   1130   1135

Leu Ile Ile Glu Leu Tyr Gly Asp Asn Ile Gln Ile Ser Ala Ser Ile
            1140   1145   1150

Asn Lys Lys Leu Gly Leu Leu Ser Tyr
    1155   1160

<210> 4911

<211> 762

<212> PRT

<213> Homo sapiens

<400> 4911

```
Met Gly Asp Leu Lys Ser Gly Phe Glu Glu Val Asp Gly Val Arg Leu
 1               5                  10                  15

Gly Tyr Leu Ile Ile Lys Gly Lys Gln Met Phe Ala Leu Ser Gln Val
            20                  25                  30

Phe Thr Asp Leu Leu Lys Asn Ile Pro Arg Thr Thr Val His Lys Arg
            35                  40                  45

Met Asp His Leu Lys Val Lys Lys His His Cys Asp Leu Glu Glu Leu
        50                  55                  60

Arg Lys Leu Lys Ala Ile Asn Ser Ile Ala Phe His Ala Ala Lys Cys
65                  70                  75                  80

Thr Leu Ile Ser Arg Glu Asp Val Glu Ala Leu Tyr Thr Ser Cys Lys
                85                  90                  95

Thr Glu Arg Val Leu Lys Thr Lys Arg Arg Arg Val Gly Arg Ala Leu
            100                 105                 110

Ala Thr Lys Ala Pro Pro Pro Glu Arg Ala Ala Ala Ala Ser Pro Arg
            115                 120                 125

Pro Gly Phe Trp Lys Asp Lys His Gln Leu Trp Arg Gly Leu Ser Gly
        130                 135                 140

Ala Ala Arg Pro Leu Pro Ile Ser Ala Gln Ser Gln Arg Pro Gly Ala
145                 150                 155                 160

Ala Ala Ala Arg Pro Ala Ala His Leu Pro Gln Ile Phe Ser Lys Tyr
                165                 170                 175

Pro Gly Ser His Tyr Pro Glu Ile Val Arg Ser Pro Cys Lys Pro Pro
            180                 185                 190

Leu Asn Tyr Glu Thr Ala Pro Leu Gln Gly Asn Tyr Val Ala Phe Pro
            195                 200                 205

Ser Asp Pro Ala Tyr Phe Arg Ser Leu Leu Cys Ser Lys His Pro Ala
        210                 215                 220

Ala Ala Ala Ala Gly Ala Thr Cys Leu Glu Arg Phe His Leu Val Asn
225                 230                 235                 240

Gly Phe Cys Pro Pro Pro His His His His His His His His His His
                245                 250                 255
```

His His His His His Arg Ala Gln Pro Pro Gln Gln Ser His His Pro
           260   265   270

Pro His His His Arg Pro Gln Pro His Leu Gly Ser Phe Pro Glu Ser
      275   280   285

Cys Ser Ser Asp Ser Glu Ser Ser Ser Tyr Ser Asp His Ala Ala Asn
      290   295   300

Asp Ser Asp Phe Gly Ser Ser Leu Ser Ser Ser Ser Asn Ser Val Ser
305   310   315   320

Ser Glu Glu Glu Glu Glu Glu Gly Glu Glu Glu Glu Glu Glu Glu Glu
           325   330   335

Glu Glu Glu Glu Gly Gly Ser Gly Ala Ser Asp Ser Ser Glu Val Ser
         340   345   350

Ser Glu Glu Glu Asp Ser Ser Thr Glu Ser Asp Ser Ser Ser Gly Ser
      355   360   365

Ser Gln Val Ser Val Gln Ser Ile Arg Phe Arg Arg Thr Ser Phe Cys
      370   375   380

Lys Pro Pro Ser Val Gln Ala Gln Ala Asn Phe Leu Tyr His Leu Ala
385   390   395   400

Ser Ala Ala Ala Ala Thr Lys Pro Ala Ala Phe Glu Asp Ala Gly Arg
         405   410   415

Leu Pro Asp Leu Lys Ser Ser Val Lys Ala Glu Ser Pro Ala Glu Trp
         420   425   430

Asn Leu Gln Ser Trp Ala Pro Lys Ala Ser Pro Val Tyr Cys Pro Ala
         435   440   445

Ser Leu Gly Ser Cys Phe Ala Glu Ile Arg Asn Asp Arg Val Ser Glu
      450   455   460

Ile Thr Phe Pro His Ser Glu Ile Ser Asn Ala Val Lys Arg Thr Asp
465   470   475   480

Leu Thr Ile Asn Cys Leu Ala Glu Gly Ala Ser Ser Pro Ser Pro Lys
         485   490   ·   495

Thr Asn Asn Ala Phe Pro Gln Gln Arg Ile Leu Arg Glu Ala Arg Lys
         500   505   510

Cys Leu Gln Thr Thr Pro Thr Thr His Cys Ala Asp Asn Asn Thr Ile
         515   520   525

Ala Ala Arg Phe Leu Asn Asn Asp Ser Ser Gly Ala Glu Ala Asn Ser
         530   535   540

Glu Lys Tyr Ser Lys Ile Leu His Cys Pro Glu Phe Ala Thr Asp Leu
545   550   555   560

Pro Ser Ser Gln Thr Asp Pro Glu Val Asn Ala Ala Gly Ala Ala Ala
                565   570   575

Thr Lys Ala Glu Asn Pro Cys Thr Asp Thr Gly Asp Lys Thr Leu Pro
                580   585   590

Phe Leu His Asn Ile Lys Ile Lys Val Glu Asp Ser Ser Ala Asn Glu
                595   600   605

Glu Tyr Glu Pro His Leu Phe Thr Asn Lys Leu Lys Cys Glu Cys Asn
            610   615   620

Asp Thr Lys Gly Glu Phe Tyr Ser Val Thr Glu Ser Lys Glu Glu Asp
625   630   635   640

Ala Leu Leu Thr Thr Ala Lys Glu Gly Phe Ala Cys Pro Glu Lys Glu
                645   650   655

Thr Pro Ser Leu Asn Pro Leu Ala Gln Ser Gln Gly Leu Ser Cys Thr
                660   665   670

Leu Gly Ser Pro Lys Pro Glu Asp Gly Glu Tyr Lys Phe Gly Ala Arg
            675   680   685

Val Arg Lys Asn Tyr Arg Thr Leu Val Leu Gly Lys Arg Pro Val Leu
            690   695   700

Gln Thr Pro Pro Val Lys Pro Asn Leu Lys Ser Ala Arg Ser Pro Arg
705   710   715   720

Pro Thr Gly Lys Thr Glu Thr Asn Glu Gly Thr Leu Asp Asp Phe Thr
                725   730   735

Val Ile Asn Arg Arg Lys Lys Val Ala Ser Asn Val Ala Ser Ala Val
                740   745   750

Lys Arg Pro Phe His Phe Met Ala Asn Lys
                755   760

<210> 4912
<211> 619
<212> PRT
<213> Homo sapiens

<400> 4912

Met Gly Gly Asp Ala Glu Thr Asn Val Leu Glu Cys Ala Asn Gln Arg
1   5   10   15

Leu Val Ile Ser Glu Thr Asp Gly Glu Ile Leu Thr Pro Gly Trp Asp
                20   25   30

Thr Gln Asp Arg Met Gly Val Glu Ser Arg Thr Asn Ile Gln Glu Leu
        35   40   45

Gly Asn Arg Asn Gln Arg Glu Ala Gly Gly Glu Asn Leu Pro Glu Thr
    50   55   60

Gln Ala His Met Gly Glu Asn Gln Glu Gln Leu Arg Cys Lys Ile Asp
65   70   75   80

Ala Glu Thr Gln Thr Pro Glu Trp Glu Asn Gln Asp Lys Asn Gly Ser
                85   90   95

Glu Asp Ala Val Glu Thr Gln Thr Phe Glu Lys Lys Asp Lys Lys Glu
            100   105   110

Ala Gly Glu Glu Asp Gly Glu Glu Ile Gln Ala Gln Gly Leu Gly Lys
        115   120   125

Gln Gly Gln Thr Gly Asp Glu Asn Gly Glu Glu Thr Gln Thr Pro Gln
    130   135   140

Trp Glu Lys Gln Asp Gln Met Lys Gly Asp Ala Asp Val Glu Ile Gln
145   150   155   160

Met Glu Glu Gly Arg Asn Lys Asp Gln Val Gly Gly Gln Asp Ala Ala
                165   170   175

Gln Thr Gln Ser Cys Gly Arg Glu Asn Val Gly Glu Val Lys Lys Glu
            180   185   190

Asn Ser Val Glu Thr Gln Ala Leu Asp Trp Gly Lys Gln Glu Cys Val
            195   200   205

Gly Asn Gly Asn Val Thr Glu Ile Gln Thr Pro Arg Trp Glu Lys His
    210   215   220

Asp Gln Gly Gly Ser Lys Lys Ala Lys Lys Thr Gln Ala Ser Gly Gly
225   230   235   240

Glu Asn Gln Lys Gln Leu Ser His Glu Ile Gln Val Gly Trp Gly Asn
            245   250   255

Lys Gly Leu Arg Arg Asp Glu Asp Ala Lys Glu Thr Gln Ile Ala Thr
        260   265   270

Lys Lys Lys Leu Arg Glu Ile Arg Glu Lys Asp Trp Val Val Ile Gln
        275   280   285

Ala Leu Trp Trp Gly Asn Arg Arg Gln Val Ala Ser Glu Ile Tyr Arg
    290   295   300

Glu Phe Glu Ile Leu Cys Trp Glu Asn Gln Asn Trp Ile Gly Gly Glu
305   310   315   320

His Arg Ala Glu Ile Gln Ala Ser Glu Lys Arg Asp Gln Arg Lys Asp
           325   330   335

Gly Cys Glu Asp Gly Thr Asn Ile Leu Ala Pro Glu Ala Glu Ile Gln
           340   345   350

Glu Gln Leu Lys Gly Glu Thr Asp Val Glu Thr Gln Ser Asn Glu Pro
           355   360   365

Leu Arg Glu Glu Asp Gly Thr Asp Ile Gln Ser Leu Gly Arg Arg Glu
           370   375   380

Val Lys Gly Glu Asp Asp Lys Asp Thr Gln Glu Leu Gly Arg Lys Asn
385   390   395   400

Gln Gly Gln Leu Gly Asn Glu Phe Ser Gly Lys Ile His Ile Pro Lys
           405   410   415

Gly Lys Asn Gln Glu His Ile Arg Gly Glu Asp Gly Ala His Thr Gln
           420   425   430

Ile Ser Glu Ser Gly Asn Trp Gly Lys Leu Thr Ser Gln Ile Asp Gly
           435   440   445

Glu Met His Ser Ala Glu Trp Lys Lys Asp Gln Gln Ile Gly Gly Glu
    450   455   460

Asn Gly Ala Glu Ile Gln Ile Gln Gly Lys Arg Asn Leu Arg Glu Val
465   470   475   480

Gly Gly Glu Asp Gly Val Lys Thr Trp Ala Pro Gly Lys Glu Thr Gln
           485   490   495

Ser Gln Phe Arg Ser Asp Leu Gly Arg Lys Ile Leu Leu Ser Glu Trp
           500   505   510

Lys Ser Gln Lys Gln Met Gly Ser Glu Asn Gly Thr Glu Ile Gln Ala
           515   520   525

Pro Val Glu Arg Asn Gln Arg Glu Pro Gly Gly Glu Asp Gly Val Lys
    530   535   540

Thr Gln Arg Pro Lys Arg Glu Asn Glu Asp Gln Leu Asp Ser Glu Ile
545   550   555   560

Gly Gly Ser His Ser Pro Gly Arg Arg Asn Trp Glu Leu Ile Gly Lys
           565   570   575

Asp Val Ala Glu Asn Gln Ala Ser Glu Lys Arg Asn Gln Arg Glu Val
              580   585   590

Gly Asn Glu Asp Gly Arg Met Ile Trp Arg Leu Arg Gly Lys Asn Trp
              595   600   605

Arg Leu Arg Ala Lys Lys Gln Thr Val Lys Lys
          610   615

<210> 4913
<211> 164
<212> PRT
<213> Homo sapiens

<400> 4913
Met Asn Val Leu Val Trp Glu Asp Cys Ile Ala Glu Gln Ala Glu Val
  1   5   10   15

Leu His Asn Asp Ser Tyr Gly Val Ile Ile Asp Cys Ser Pro Lys Gly
                  20   25   30

Met Phe Ser Leu Asn Cys Thr Ser Gln Ser Ala Cys His Gly His Thr
              35   40   45

Met Phe Ser Trp Ser Glu Gln Asn Gly Gln Met Val Glu Met Ile Arg
          50   55   60

Ser Met Ala Arg Val Pro Ile Ile Trp Lys His Gly Gly Ile Val Ala
65   70   75   80

Pro Gln Pro Gln Met Ile Trp Pro Ala Val Gly Ala Lys His Lys Asp
                  85   90   95

Leu Trp Lys Leu Leu Met Ala Leu Asn Lys Ile Lys Ile Trp Glu Arg
              100   105   110

Ile Lys Lys His Leu Glu Gly His Ser Arg Asn Leu Asp Ile Ala Lys
              115   120   125

Leu Lys Glu Gln Ile Phe Lys Ala Ser Gln Ala His Leu Thr Leu Met
          130   135   140

Pro Gly Thr Gly Val Leu Glu Gly Ala Ala Asp Gly Leu Ala Ala Ile
145   150   155   160

Asn Pro Leu Lys

<210> 4914

<211> 236

<212> PRT

<213> Homo sapiens

<400> 4914

```
Met Ser Ser Thr Glu Ser Ala Gly Arg Thr Ala Asp Lys Ser Pro Arg
 1               5                  10                  15
Gln Gln Val Asp Arg Leu Leu Val Gly Leu Arg Trp Arg Arg Leu Glu
                20                  25                  30
Glu Pro Leu Gly Phe Ile Lys Val Leu Gln Trp Leu Phe Ala Ile Phe
            35                  40                  45
Ala Phe Gly Ser Cys Gly Ser Tyr Ser Gly Glu Thr Gly Ala Met Val
            50                  55                  60
Arg Cys Asn Asn Glu Ala Lys Asp Val Ser Ser Ile Ile Val Ala Phe
 65                 70                  75                  80
Gly Tyr Pro Phe Arg Leu His Arg Ile Gln Tyr Glu Met Pro Leu Cys
                85                  90                  95
Asp Glu Gly Ser Ser Ser Lys Thr Met His Leu Met Gly Asp Phe Ser
                100                 105                 110
Ala Pro Ala Glu Phe Phe Val Thr Leu Gly Ile Phe Ser Phe Phe Tyr
            115                 120                 125
Thr Met Ala Ala Leu Val Ile Tyr Leu Arg Phe His Asn Leu Tyr Thr
            130                 135                 140
Glu Asn Lys Arg Phe Pro Leu Val Asp Phe Cys Val Thr Val Ser Phe
145                 150                 155                 160
Thr Phe Phe Trp Leu Val Ala Ala Ala Ala Trp Gly Lys Gly Leu Thr
                165                 170                 175
Asp Val Lys Gly Ala Thr Arg Pro Ser Ser Leu Thr Ala Ala Met Ser
            180                 185                 190

Val Cys His Gly Glu Glu Ala Val Cys Ser Ala Gly Ala Thr Pro Ser
            195                 200                 205
Met Gly Leu Ala Asn Ile Ser Val Val Arg Pro Val Ala Thr Ala Gly
```

```
          210                    215                    220
Ser Ser Thr Ser Pro Ala Ala Gln Ala Cys Pro Ser
225                    230                    235
```

<210> 4915

<211> 390

<212> PRT

<213> Homo sapiens

<400> 4915

```
Met Cys Ile Cys His Leu Pro Cys Arg Pro Val Lys Pro Asn Ile Ile
 1                   5                   10                  15
Gly Glu Gln Ile Thr Ser Lys Met Gly Ala His Tyr His Cys Ile Ile
                20                  25                  30
Cys Ser Ala Thr Ile Thr Arg Arg Thr Asp Met Leu Gly His Val Arg
            35                  40                  45
Arg His Met Asn Lys Gly Glu Thr Lys Ser Ser Tyr Ile Ala Ala Ser
        50                  55                  60
Thr Ala Lys Pro Pro Lys Glu Ile Leu Lys Glu Ala Asp Thr Asp Val
65                  70                  75                  80
Gln Val Cys Pro Asn Tyr Ser Ile Pro Gln Lys Thr Asp Ser Tyr Phe
                85                  90                  95
Asn Pro Lys Met Lys Leu Asn Arg Gln Leu Ile Phe Cys Thr Leu Ala
                100                 105                 110
Ala Leu Ala Glu Glu Arg Lys Pro Leu Glu Cys Leu Asp Ala Phe Gly
            115                 120                 125
Ala Thr Gly Ile Met Gly Leu Gln Trp Ala Lys His Leu Gly Asn Ala
        130                 135                 140
Val Lys Val Thr Ile Asn Asp Leu Asn Glu Asn Ser Val Thr Leu Ile
145                 150                 155                 160
Gln Glu Ser Cys His Leu Asn Lys Leu Lys Val Val Val Asp Ser Lys
                165                 170                 175
Glu Lys Glu Lys Ser Asp Asp Ile Leu Glu Glu Gly Glu Lys Asn Leu
                180                 185                 190
Gly Asn Ile Lys Val Thr Lys Met Asp Ala Asn Val Leu Met His Leu
```

```
            195                    200                    205
Arg Ser Phe Asp Phe Ile His Leu Asp Pro Phe Gly Thr Ser Val Asn
        210                    215                    220
Tyr Leu Asp Ser Ala Phe Arg Asn Ile Arg Asn Leu Gly Ile Val Ser
225                    230                    235                    240
Val Thr Ser Thr Asp Ile Ser Ser Leu Tyr Ala Lys Ala Gln His Val
                    245                    250                    255
Ala Arg Arg His Tyr Gly Cys Asn Ile Val Arg Thr Glu Tyr Tyr Lys
                    260                    265                    270
Glu Leu Ala Ala Arg Ile Val Val Ala Ala Val Ala Arg Ala Ala Ala
        275                    280                    285
Arg Cys Asn Lys Gly Ile Glu Val Leu Phe Ala Val Ala Leu Glu His
        290                    295                    300
Phe Val Leu Val Val Val Arg Val Leu Arg Gly Pro Thr Ser Ala Asp
305                    310                    315                    320
Glu Thr Ala Lys Lys Ile Gln Tyr Leu Ile His Cys Gln Trp Cys Glu
                    325                    330                    335
Glu Arg Ile Phe Gln Lys Asp Gly Asn Met Val Glu Asp Tyr Ser Ala
                    340                    345                    350
Asn Phe Val Ile Ser Tyr Thr Gly Phe Pro Phe Val Asn Arg Gln Asp
                    355                    360                    365
Ile Arg Lys Thr His Ile Ile Asp Ser Cys Leu Val Thr Val Met Glu Ala
        370                    375                    380
Cys Leu Glu Arg Gln Gln
385                    390
```

```
<210> 4916
<211> 619
<212> PRT
<213> Homo sapiens

<400> 4916
```

```
Met Ala Arg Leu Gln Arg Arg Ala Ser Gln Arg Arg Gln Gly Gly Thr
 1                  5                    10                    15
Trp Gly Leu Arg Val Val Gln Glu Pro Gly Gly His Leu Tyr Ile Trp
```

```
                20                      25                      30
Leu Ala Ser Glu Lys Ala His Glu Arg Gln Arg Ala Val His Ser Cys
            35                      40                      45
Met Ile Leu Leu Lys Phe Leu Asn His Asn Gly Tyr Leu Asp Pro Lys
        50                      55                      60
Glu Asp Phe Lys Arg Ile Gly Gln Leu Val Gly Ile Leu Gly Met Leu
65                      70                      75                      80
Cys Gln Asp Pro Asp Arg Ala Thr Gln Arg Cys Ser Leu Glu Gly Ala
                85                      90                      95
Ser His Leu Tyr Gln Leu Leu Met Cys His Lys Arg Glu Ala Leu Gln
            100                     105                     110
Ala Glu Ser Gln Ala Pro Lys Glu Leu Ser Gln Ala His Ser Asp Gly
            115                     120                     125
Ala Pro Leu Trp Asn Ser Arg Asp Gln Lys Ala Thr Pro Leu Gly Pro
        130                     135                     140
Gln Glu Met Ala Lys Asn His Ile Phe Gln Leu Cys Ser Phe Gln Val
145                     150                     155                     160
Ile Lys Asp Ile Met Gln Gln Leu Thr Leu Ala Glu Leu Ser Asp Leu
                165                     170                     175
Ile Trp Thr Ala Ile Asp Gly Leu Gly Ser Thr Ser Pro Phe Arg Val
            180                     185                     190
Gln Ala Ala Ser Glu Met Leu Leu Thr Ala Val Gln Glu His Gly Ala
            195                     200                     205
Lys Leu Glu Ile Val Ser Ser Met Ala Gln Ala Ile Arg Leu Arg Leu
        210                     215                     220
Cys Ser Val His Ile Pro Gln Ala Lys Glu Lys Thr Leu His Ala Ile
225                     230                     235                     240
Thr Leu Leu Ala Arg Ser His Thr Cys Glu Leu Val Ala Thr Phe Leu
                245                     250                     255
Asn Ile Ser Ile Pro Leu Asp Ser His Thr Phe Gln Leu Trp Arg Ala
            260                     265                     270
Leu Gly Ala Glu Gln Pro Thr Ser His Leu Val Leu Thr Thr Leu Leu
            275                     280                     285
Ala Cys Leu Gln Glu Arg Pro Leu Pro Thr Gly Ala Ser Asp Ser Ser
        290                     295                     300
Pro Cys Pro Lys Glu Lys Thr Tyr Leu Arg Leu Leu Ala Ala Met Asn
```

```
305              310              315              320
Met Leu His Glu Leu Gln Phe Ala Arg Glu Phe Lys Gln Ala Val Gln
                  325              330              335
Glu Gly Tyr Pro Lys Leu Phe Leu Ala Leu Leu Thr Gln Met His Tyr
                  340              345              350
Val Leu Glu Leu Asn Leu Pro Ser Glu Pro Gln Pro Lys Gln Gln Ala
            355              360              365
Gln Glu Ala Ala Val Pro Ser Pro Gln Ser Cys Ser Thr Ser Leu Glu
            370              375              380
Ala Leu Lys Ser Leu Leu Ser Thr Thr Gly His Trp His Asp Phe Ala
385              390              395              400
His Leu Glu Leu Gln Gly Ser Trp Glu Leu Phe Thr Thr Ile His Thr
                  405              410              415
Tyr Pro Lys Gly Val Gly Leu Leu Ala Arg Ala Met Val Gln Asn His
                  420              425              430
Cys Arg Gln Ile Pro Ala Val Leu Arg Gln Leu Leu Pro Ser Leu Gln
            435              440              445
Ser Pro Gln Glu Arg Glu Arg Lys Val Ala Ile Leu Ile Leu Thr Lys
            450              455              460
Phe Leu Tyr Ser Pro Val Leu Leu Glu Val Leu Pro Lys Gln Ala Ala
465              470              475              480
Leu Thr Val Leu Ala Gln Gly Leu His Asp Pro Ser Pro Glu Val Arg
                  485              490              495
Val Leu Ser Leu Gln Gly Leu Ser Asn Ile Leu Phe His Pro Asp Lys
                  500              505              510
Glu Arg Asp Gly Ile Arg Ala Ala Ala Met Ala Leu Phe Gly Asp Leu
            515              520              525
Val Ala Ala Met Ala Asp Arg Glu Leu Ser Gly Leu Arg Thr Gln Val
            530              535              540
His Gln Ser Met Val Pro Leu Leu Leu His Leu Lys Asp Gln Cys Pro
545              550              555              560
Ala Val Ala Thr Gln Ala Lys Phe Thr Phe Tyr Arg Cys Ala Val Leu
                  565              570              575
Leu Arg Trp Arg Leu Leu His Thr Leu Phe Cys Thr Leu Ala Trp Glu
                  580              585              590
Arg Gly Leu Ser Ala Arg His Phe Leu Trp Thr Cys Leu Ala Thr Pro
```

```
              595                    600                     605
Ser Ala Thr Thr Pro Arg Pro Cys Ser Arg Cys
    610                 615
```

<210> 4917

<211> 1103

<212> PRT

<213> Homo sapiens

<400> 4917

```
Met His Phe Leu Ala Ala Gln Asn Gln Phe Leu His Ser Pro Phe Leu
    1                   5                   10                  15
Glu Arg Pro Met Asp Met Pro Tyr Met Ile Phe Asp Pro Asn Asn Pro
                20                  25                  30
Leu Met Thr Gly Gln Leu Leu Gly Ser Ser Leu Thr Gln Met Pro Pro
                35                  40                  45
Gln Ala Ser Ser Ser His Thr Thr Ala Pro Thr Thr Val Ala Ala Ser
        50                  55                  60
Leu Lys Arg Lys Leu Asp Asp Lys Glu Asp Asn Asn Cys Ser Glu Lys
    65                  70                  75                  80
Glu Gly Gly Asn Ser Gly Glu Asp Gln His Arg Asp Lys Arg Leu Arg
                85                  90                  95
Thr Thr Ile Thr Pro Glu Gln Leu Glu Ile Leu Tyr Glu Lys Tyr Leu
                100                 105                 110
Leu Asp Ser Asn Pro Thr Arg Lys Met Leu Asp His Ile Ala Arg Glu
                115                 120                 125
Val Gly Leu Lys Lys Arg Val Val Gln Val Trp Phe Gln Asn Thr Arg
                130                 135                 140
Ala Arg Glu Arg Lys Gly Gln Phe Arg Ala Val Gly Pro Ala Gln Ser
145                 150                 155                 160
His Lys Arg Cys Pro Phe Cys Arg Ala Leu Phe Lys Ala Lys Ser Ala
                165                 170                 175
Leu Glu Ser His Ile Arg Ser Arg His Trp Asn Glu Gly Lys Gln Ala
                180                 185                 190
```

Gly Tyr Ser Leu Pro Pro Ser Pro Leu Ile Ser Thr Glu Asp Gly Gly
        195   200   205

Glu Ser Pro Gln Lys Tyr Ile Tyr Phe Asp Tyr Pro Ser Leu Pro Leu
        210   215   220

Thr Lys Ile Asp Leu Ser Ser Glu Asn Glu Leu Ala Ser Thr Val Ser
225   230   235   240

Thr Pro Val Ser Lys Thr Ala Glu Leu Ser Pro Lys Asn Leu Leu Ser
                245   250   255

Pro Ser Ser Phe Lys Ala Glu Cys Ser Glu Asp Val Glu Asn Leu Asn
                260   265   270

Ala Pro Pro Ala Glu Ala Gly Tyr Asp Gln Asn Lys Thr Asp Phe Asp
            275   280   285

Glu Thr Ser Ser Ile Asn Thr Ala Ile Ser Asp Ala Thr Thr Gly Asp
        290   295   300

Glu Gly Asn Thr Glu Met Glu Ser Thr Thr Gly Ser Ser Gly Asp Val
305   310   315   320

Lys Pro Ala Leu Ser Pro Lys Glu Pro Lys Thr Leu Asp Thr Leu Pro
                325   330   335

Lys Pro Ala Thr Thr Pro Thr Thr Glu Val Cys Asp Asp Lys Phe Leu
            340   345   350

Phe Ser Leu Thr Ser Pro Ser Ile His Phe Asn Asp Lys Asp Gly Asp
        355   360   365

His Asp Gln Ser Phe Tyr Ile Thr Asp Asp Pro Asp Asp Asn Ala Asp
    370   375   380

Arg Ser Glu Thr Ser Ser Ile Ala Asp Pro Ser Ser Pro Asn Pro Phe
385   390   395   400

Gly Ser Ser Asn Pro Phe Lys Ser Lys Ser Asn Asp Arg Pro Gly His
                405   410   415

Lys Arg Phe Arg Thr Gln Met Ser Asn Leu Gln Leu Lys Val Leu Lys
                420   425   430

Ala Cys Phe Ser Asp Tyr Arg Thr Pro Thr Met Gln Glu Cys Glu Met
            435   440   445

Leu Gly Asn Glu Ile Gly Leu Pro Lys Arg Val Val Gln Val Trp Phe
        450   455   460

Gln Asn Ala Arg Ala Lys Glu Lys Lys Phe Lys Ile Asn Ile Gly Lys
465   470   475   480

Pro Phe Met Ile Asn Gln Gly Gly Thr Glu Gly Thr Lys Pro Glu Cys
            485   490   495

Thr Leu Cys Gly Val Lys Tyr Ser Ala Arg Leu Ser Ile Arg Asp His
         500   505   510

Ile Phe Ser Lys Gln His Ile Ser Lys Val Arg Glu Thr Val Gly Ser
         515   520   525

Gln Leu Asp Arg Glu Lys Asp Tyr Leu Ala Pro Thr Thr Val Arg Gln
     530   535   540

Leu Met Ala Gln Gln Glu Leu Asp Arg Ile Lys Lys Ala Ser Asp Val
545   550   555   560

Leu Gly Leu Thr Val Gln Gln Pro Gly Met Met Asp Ser Ser Ser Leu
         565   570   575

His Gly Ile Ser Leu Pro Thr Ala Tyr Pro Gly Leu Pro Gly Leu Pro
         580   585   590

Pro Val Leu Leu Pro Gly Met Asn Gly Pro Ser Ser Leu Pro Gly Phe
         595   600   605

Pro Gln Asn Ser Asn Thr Leu Thr Pro Pro Gly Ala Gly Met Leu Gly
     610   615   620

Phe Pro Thr Ser Ala Thr Ser Ser Pro Ala Leu Ser Leu Ser Ser Ala
625   630   635   640

Pro Thr Lys Pro Leu Leu Gln Thr Pro Pro Pro Pro Pro Pro Pro Pro
         645   650   655

Pro Pro Pro Pro Ser Ser Ser Leu Ser Gly Gln Gln Thr Glu Gln Gln
         660   665   670

Asn Lys Glu Ser Glu Lys Lys Gln Thr Lys Pro Asn Lys Val Lys Lys
         675   680   685

Ile Lys Glu Glu Glu Leu Glu Ala Thr Lys Pro Glu Lys His Pro Lys
         690   695   700

Lys Glu Glu Lys Ile Ser Ser Ala Leu Ser Val Leu Gly Lys Val Val
705   710   715   720

Gly Glu Thr His Val Asp Pro Ile Gln Leu Gln Ala Leu Gln Asn Ala
         725   730   735

Ile Ala Gly Asp Pro Ala Ser Phe Ile Gly Gly Gln Phe Leu Pro Tyr
         740   745   750

Phe Ile Pro Gly Phe Ala Ser Tyr Phe Thr Pro Gln Leu Pro Gly Thr
         755   760   765

Val Gln Gly Gly Tyr Phe Pro Pro Val Cys Gly Met Glu Ser Leu Phe
    770   775   780

Pro Tyr Gly Pro Thr Met Pro Gln Thr Leu Ala Gly Leu Ser Pro Gly
785   790   795   800

Ala Leu Leu Gln Gln Tyr Gln Gln Tyr Gln Gln Asn Leu Gln Glu Ser
          805   810   815

Leu Gln Lys Gln Gln Lys Gln Gln Gln Glu Gln Gln Gln Lys Pro Ala
        820   825   830

Gln Ala Lys Thr Ser Lys Val Glu Ser Asp Gln Pro Gln Asn Ser Asn
        835   840   845

Asp Ala Ser Glu Thr Lys Glu Asp Lys Ser Thr Ala Thr Glu Ser Thr
    850   855   860

Lys Glu Glu Pro Gln Leu Glu Ser Lys Ser Ala Asp Phe Ser Asp Thr
865   870   875   880

Tyr Val Val Pro Phe Val Lys Tyr Glu Phe Ile Cys Arg Lys Cys Gln
        885   890   895

Met Met Phe Thr Asp Glu Asp Ala Ala Val Asn His Gln Lys Ser Phe
        900   905   910

Cys Tyr Phe Gly Gln Pro Leu Ile Asp Pro Gln Glu Thr Val Leu Arg
        915   920   925

Val Pro Val Ser Lys Tyr Gln Cys Leu Ala Cys Asp Val Ala Ile Ser
    930   935   940

Gly Asn Glu Ala Leu Ser Gln His Leu Gln Ser Ser Leu His Lys Glu
945   950   955   960

Lys Thr Ile Lys Gln Ala Met Arg Asn Ala Lys Glu His Val Arg Leu

        965   970   975

Leu Pro His Ser Val Cys Ser Pro Asn Pro Asn Thr Thr Ser Thr Ser
        980   985   990

Gln Ser Ala Ala Ser Ser Asn Asn Thr Tyr Pro His Leu Ser Cys Phe
        995   1000   1005

Ser Met Lys Ser Trp Pro Asn Ile Leu Phe Gln Ala Ser Ala Arg Arg
    1010   1015   1020

Ala Ala Ser Pro Pro Ser Ser Pro Pro Ser Leu Ser Leu Pro Ser Thr
1025   1030   1035   1040

Val Thr Ser Ser Leu Cys Ser Thr Ser Gly Val Gln Thr Ser Leu Pro

```
                1045              1050              1055
Thr Glu Ser Cys Ser Asp Glu Ser Asp Ser Glu Leu Ser Gln Lys Leu
              1060              1065              1070
Glu Asp Leu Asp Asn Ser Leu Glu Val Lys Ala Lys Pro Ala Ser Gly
          1075              1080              1085
Leu Asp Gly Asn Phe Asn Ser Ile Arg Met Asp Met Phe Ser Val
      1090              1095              1100
```

<210> 4918

<211> 727

<212> PRT

<213> Homo sapiens

<400> 4918

```
Met Gln Gln Lys Thr Lys Leu Phe Pro Gln Ala Leu Lys Tyr Ser Ile
1               5                   10                  15
Pro His Leu Gly Lys Cys Met Gln Lys Gln His Leu Asn His Tyr Asn
              20                  25                  30
Phe Ala Asp His Cys Tyr Asn Arg Ile Lys Leu Lys Lys Tyr His Leu
          35                  40                  45
Thr Lys Cys Leu Gln Asn Lys Pro Lys Ile Ser Glu Leu Ala Arg Asn
      50                  55                  60
Ile Pro Ser Arg Ser Phe Ser Cys Lys Asp Leu Gln Pro Val Lys Gln
65                  70                  75                  80
Glu Asn Glu Lys Pro Leu Pro Glu Asn Thr Asp Ala Phe Glu Lys Val
              85                  90                  95
Arg Thr Lys Leu Glu Thr Gln Pro Gln Glu Glu Tyr Glu Ile Ile Asn
              100                 105                 110
Val Glu Val Lys His Gly Gly Phe Val Tyr Tyr Gln Glu Gly Cys Cys
          115                 120                 125
Leu Val Arg Ser Lys Asp Glu Glu Ala Asp Asn Asp Asn Tyr Glu Val
      130                 135                 140
Leu Phe Asn Leu Glu Glu Leu Lys Leu Asp Gln Pro Phe Ile Asp Cys
145                 150                 155                 160
Ile Arg Val Ala Pro Asp Glu Lys Tyr Val Ala Ala Lys Ile Arg Thr
```

```
                165                   170                   175
Glu Asp Ser Glu Ala Ser Thr Cys Val Ile Ile Lys Leu Ser Asp Gln
                180                   185                   190
Pro Val Met Glu Ala Ser Phe Pro Asn Val Ser Ser Phe Glu Trp Val
                195                   200                   205
Lys Asp Glu Glu Asp Glu Asp Val Leu Phe Tyr Thr Phe Gln Arg Asn
        210                   215                   220
Leu Arg Cys His Asp Val Tyr Arg Ala Thr Phe Gly Asp Asn Lys Arg
225                   230                   235                   240
Asn Glu Arg Phe Tyr Thr Glu Lys Asp Pro Ser Tyr Phe Val Phe Leu
                245                   250                   255
Tyr Leu Thr Lys Asp Ser Arg Phe Leu Thr Ile Asn Ile Met Asn Lys
                260                   265                   270
Thr Thr Ser Glu Val Trp Leu Ile Asp Gly Leu Ser Pro Trp Asp Pro
                275                   280                   285
Pro Val Leu Ile Gln Lys Arg Ile His Gly Ile Leu Tyr Tyr Val Glu
        290                   295                   300
His Arg Asp Asp Glu Leu Tyr Ile Leu Thr Asn Val Gly Glu Pro Thr
305                   310                   315                   320
Glu Phe Lys Leu Met Arg Thr Ala Ala Asp Thr Pro Ala Ile Met Asn
                325                   330                   335
Trp Asp Leu Phe Phe Thr Met Lys Arg Asn Thr Lys Val Ile Asp Leu
                340                   345                   350
Asp Met Phe Lys Asp His Cys Val Leu Phe Leu Lys His Ser Asn Leu
                355                   360                   365
Leu Tyr Val Asn Val Ile Gly Leu Ala Asp Asp Ser Val Arg Ser Leu
        370                   375                   380
Lys Leu Pro Pro Trp Ala Cys Gly Phe Ile Met Asp Thr Asn Ser Asp
385                   390                   395                   400
Pro Lys Asn Cys Pro Phe Gln Leu Cys Ser Pro Ile Arg Pro Pro Lys
                405                   410                   415
Tyr Tyr Thr Tyr Lys Phe Ala Glu Gly Lys Leu Phe Glu Glu Thr Gly
                420                   425                   430
His Glu Asp Pro Ile Thr Lys Thr Ser Arg Val Leu Arg Leu Glu Ala
                435                   440                   445
Lys Ser Lys Asp Gly Lys Leu Val Pro Met Thr Val Phe His Lys Thr
```

```
             450                    455                    460
Asp Ser Glu Asp Leu Gln Lys Lys Pro Leu Leu Val His Val Tyr Gly
465                    470                    475                    480
Ala Tyr Gly Met Asp Leu Lys Met Asn Phe Arg Pro Glu Arg Arg Val
                 485                    490                    495
Leu Val Asp Asp Gly Trp Ile Leu Ala Tyr Cys His Val Arg Gly Gly
                 500                    505                    510
Gly Glu Leu Gly Leu Gln Trp His Ala Asp Gly Arg Leu Thr Lys Lys
                 515                    520                    525
Leu Asn Gly Leu Ala Asp Leu Glu Ala Cys Ile Lys Thr Leu His Gly
                 530                    535                    540
Gln Gly Phe Ser Gln Pro Ser Leu Thr Thr Leu Thr Ala Phe Ser Ala
545                    550                    555                    560
Gly Gly Val Leu Ala Gly Ala Leu Cys Asn Ser Asn Pro Glu Leu Val
                 565                    570                    575
Arg Ala Val Thr Leu Glu Ala Pro Phe Leu Asp Val Leu Asn Thr Met
                 580                    585                    590
Met Asp Thr Thr Leu Pro Leu Thr Leu Glu Glu Leu Glu Glu Trp Gly
                 595                    600                    605
Asn Pro Ser Ser Asp Glu Lys His Lys Asn Tyr Ile Lys Arg Tyr Cys
                 610                    615                    620
Pro Tyr Gln Asn Ile Lys Pro Gln His Tyr Pro Ser Ile His Ile Thr
625                    630                    635                    640
Ala Tyr Glu Asn Asp Glu Arg Val Pro Leu Lys Gly Ile Val Ser Tyr
                 645                    650                    655
Thr Glu Lys Leu Lys Glu Ala Ile Ala Glu His Ala Lys Asp Thr Gly
                 660                    665                    670
Glu Gly Tyr Gln Thr Pro Asn Ile Ile Leu Asp Ile Gln Pro Gly Gly
                 675                    680                    685
Asn His Val Ile Glu Asp Ser His Lys Lys Ile Thr Ala Gln Ile Lys
                 690                    695                    700
Phe Leu Tyr Glu Glu Leu Gly Leu Asp Ser Thr Ser Val Phe Glu Asp
705                    710                    715                    720
Leu Lys Lys Tyr Leu Lys Phe
                 725
```

<210> 4919

<211> 378

<212> PRT

<213> Homo sapiens

<400> 4919

Met Glu Asp Arg Asp Glu Ser Glu Val Ser Asp Glu Gly Gly Ser Pro
 1   5   10   15

Ile Ser Ser Glu Gly Gln Glu Pro Arg Ala Asp Pro Glu Pro Pro Gly
                20   25   30

Leu Ala Ala Gly Leu Val Gln Gln Asp Leu Val Phe Glu Val Glu Thr
            35   40   45

Pro Ala Val Leu Pro Glu Pro Val Pro Gln Glu Asp Gly Val Asp Leu
        50   55   60

Leu Gly Leu His Ser Glu Val Gly Ala Gly Pro Ala Val Pro Pro Gln
65   70   75   80

Ala Cys Lys Ala Pro Ser Ser Asn Thr Asp Leu Leu Ser Cys Leu Leu
                85   90   95

Gly Pro Pro Glu Ala Ala Ser Gln Gly Pro Pro Glu Asp Leu Leu Ser
                100   105   110

Glu Asp Pro Leu Leu Leu Ala Ser Pro Ala Pro Pro Leu Ser Val Gln
            115   120   125

Ser Thr Pro Arg Gly Gly Pro Pro Ala Ala Ala Asp Pro Phe Gly Pro
        130   135   140

Leu Leu Pro Ser Ser Gly Asn Asn Ser Gln Pro Cys Ser Asn Pro Asp
145   150   155   160

Leu Phe Gly Glu Phe Leu Asn Ser Asp Ser Val Thr Val Pro Pro Ser
                165   170   175

Phe Pro Ser Ala His Ser Ala Pro Pro Pro Ser Cys Ser Ala Asp Phe
            180   185   190

Leu His Leu Gly Asp Leu Pro Gly Glu Pro Ser Lys Met Thr Ala Ser
            195   200   205

Ser Ser Asn Pro Asp Leu Leu Gly Gly Trp Ala Ala Trp Thr Glu Thr
        210   215   220

Ala Ala Ser Ala Val Ala Pro Thr Pro Ala Thr Glu Gly Ser Pro Ala

```
225                 230                 235                 240
Gly Phe Pro Pro Gly Gly Phe Ile Pro Lys Thr Ala Thr Thr Pro Lys
                245                 250                 255
Gly Ser Ser Ser Trp Gln Thr Ser Arg Pro Pro Ala Gln Gly Ala Ser
            260                 265                 270
Trp Pro Pro Gln Ala Lys Pro Pro Pro Lys Ala Cys Thr Gln Pro Arg
        275                 280                 285
Pro Asn Tyr Ala Ser Asn Phe Ser Val Ile Gly Ala Arg Glu Glu Arg
    290                 295                 300
Gly Val Arg Ala Pro Ser Phe Gly Glu Ser Pro Thr Leu Cys Cys Cys
305                 310                 315                 320
Gly Val Cys Arg Asp Leu Pro Glu Leu Ala Lys Gly Arg Thr Tyr Val
                325                 330                 335
Val Phe Phe Ile Ser Glu Pro Ser Pro Gly Thr Gly Thr Ala Lys Pro
                340                 345                 350
Leu Arg Glu Arg Arg Gly Phe Arg Cys Val Phe Thr Gly Leu Ser Leu
            355                 360                 365
Gly Gln Ala Ser Gly Ser Leu Leu Phe Gln
    370                 375
```

<210> 4920

<211> 168

<212> PRT

<213> Homo sapiens

<400> 4920

```
Met Glu Glu Ile Arg Phe Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser
 1               5                   10                  15
Leu Leu Ser Gly Leu Leu Lys Lys Asp Pro Lys Gln Arg Leu Gly Gly
            20                  25                  30
Gly Ser Glu Asp Ala Lys Glu Ile Met Gln His Arg Phe Phe Ala Gly
        35                  40                  45
Ile Val Trp Gln His Val Tyr Glu Lys Lys Val Arg Leu Leu Pro Ala
    50                  55                  60
Tyr Ser Arg Ala Arg Met Leu Pro Thr Tyr Pro His Ser Arg Met His
```

65   70   75   80
Val Ala Arg Ser Pro Asp Phe Pro His Thr Arg Pro His Leu Arg Ser

                     85   90   95
Leu Leu Gln Ser Trp Tyr Lys Glu Gly Leu Ala Ala Pro Thr Ser Ala
                100   105   110
Pro Gly Ala Gln Arg Leu Trp His Cys Arg Val Pro Pro Gly Asn Trp
           115   120   125
Pro Gly Pro His Phe Leu Leu Pro Ser Glu Val Cys His Thr Leu Ser
           130   135   140
Phe Leu Leu Pro Ser Glu Val Cys His Thr Leu Ser Ala Ser Leu Gly
145   150   155   160
Val Pro Phe Pro Asp Ala Val Gln
                165

<210> 4921
<211> 219
<212> PRT
<213> Homo sapiens

<400> 4921
Met Val Gly Gly Arg Ser Cys Pro Leu Arg Gln Val Trp Val Gly Asn
 1   5   10   15
Lys Ser Gly Leu Leu Val Gly Ala Glu Ala Gly Gly Ser Ala Ala Asp
                20   25   30
Gly Val Thr Pro Pro Gln Glu Cys Ile Leu Ser Gly Ile Met Ser Val
           35   40   45
Asn Gly Lys Lys Val Leu His Met Asp Arg Asn Pro Tyr Tyr Gly Gly
      50   55   60
Glu Ser Ser Ser Ile Thr Pro Leu Glu Glu Leu Tyr Lys Arg Phe Gln
65   70   75   80
Leu Leu Glu Gly Pro Pro Glu Ser Met Gly Arg Gly Arg Asp Trp Asn
                85   90   95
Val Asp Leu Ile Pro Lys Phe Leu Met Ala Asn Gly Gln Leu Val Lys
           100   105   110

Met Leu Leu Tyr Thr Glu Val Thr Arg Tyr Leu Asp Phe Lys Val Val
　　　　115　　　　　　　　　120　　　　　　　　125

Glu Gly Ser Phe Val Tyr Lys Gly Gly Lys Ile Tyr Arg Val Pro Ser
　　　130　　　　　　　　135　　　　　　　　140

Thr Glu Thr Glu Ala Leu Ala Ser Asn Leu Met Gly Met Phe Glu Lys
145　　　　　　　　150　　　　　　　　155　　　　　　　　160

Arg Arg Phe Arg Lys Phe Leu Val Phe Val Ala Asn Phe Asp Glu Asn
　　　　　　165　　　　　　　　170　　　　　　　　175

Asp Pro Lys Thr Phe Glu Gly Val Asp Pro Gln Thr Thr Ser Met Arg
　　　　180　　　　　　　　185　　　　　　　　190

Asp Val Tyr Arg Lys Phe Asp Leu Gly Gln Asp Val Ile Asp Phe Thr
　　　195　　　　　　　　200　　　　　　　　205

Gly His Ala Leu Ala Leu Tyr Arg Thr Asp Glu
　　　210　　　　　　　　215

<210> 4922

<211> 419

<212> PRT

<213> Homo sapiens

<400> 4922

Met Leu Arg Cys Phe His Ser Lys Gly Val Asn Tyr Ile Asn Phe Ser
1　　　　　　5　　　　　　　　10　　　　　　　　15

Ala Thr Gly Lys Leu Leu Val Ser Val Gly Val Asp Pro Glu His Thr
　　　　　　20　　　　　　　　25　　　　　　　　30

Ile Thr Val Trp Arg Trp Gln Glu Gly Ala Lys Val Ala Ser Arg Gly
　　　　　　35　　　　　　　　40　　　　　　　　45

Gly His Leu Glu Arg Ile Phe Val Val Glu Phe Arg Pro Asp Ser Asp
　　　50　　　　　　　　55　　　　　　　　60

Thr Gln Phe Val Ser Val Gly Val Lys His Met Lys Phe Trp Thr Leu
65　　　　　　　　70　　　　　　　　75　　　　　　　　80

Ala Gly Ser Ala Leu Leu Tyr Lys Lys Gly Val Ile Gly Ser Leu Gly
　　　　　　85　　　　　　　　90　　　　　　　　95

Ala Ala Lys Met Gln Thr Met Leu Ser Val Ala Phe Gly Ala Asn Asn
　　　　　　100　　　　　　　　105　　　　　　　　110

Leu Thr Phe Thr Gly Ala Ile Asn Gly Asp Val Tyr Val Trp Lys Asp
     115   120   125

His Phe Leu Ile Arg Leu Val Ala Lys Ala His Thr Gly Pro Val Phe
     130   135   140

Thr Met Tyr Thr Thr Leu Arg Asp Gly Leu Ile Val Thr Gly Gly Lys
145   150   155   160

Glu Arg Pro Thr Lys Glu Gly Gly Ala Val Lys Leu Trp Asp Gln Glu
           165   170   175

Met Lys Arg Cys Arg Ala Phe Gln Leu Glu Thr Gly Gln Leu Val Glu
           180   185   190

Cys Val Arg Ser Val Cys Arg Gly Lys Gly Lys Ile Leu Val Gly Thr
           195   200   205

Lys Asp Gly Glu Ile Ile Glu Val Gly Glu Lys Asn Ala Ala Ser Asn
     210   215   220

Ile Leu Ile Asp Gly His Met Glu Gly Glu Ile Trp Gly Leu Ala Thr
225   230   235   240

His Pro Ser Lys Asp Leu Phe Ile Ser Ala Ser Asn Asp Gly Thr Ala
           245   250   255

Arg Ile Trp Asp Leu Ala Asp Lys Lys Leu Leu Asn Lys Val Ser Leu
           260   265   270

Gly His Ala Ala Arg Cys Ala Ala Tyr Ser Pro Asp Gly Glu Met Val
           275   280   285

Ala Ile Gly Met Lys Asn Gly Glu Phe Val Ile Leu Leu Val Asn Ser
     290   295   300

Leu Lys Val Trp Gly Lys Lys Arg Asp Arg Lys Ser Ala Ile Gln Asp
305   310   315   320

Ile Arg Ile Ser Pro Asp Asn Arg Phe Leu Ala Val Gly Ser Ser Glu
           325   330   335

His Thr Val Asp Phe Tyr Asp Leu Thr Gln Gly Thr Asn Leu Asn Arg
           340   345   350

Ile Gly Tyr Cys Lys Asp Ile Pro Ser Phe Val Ile Gln Met Asp Phe
          355   360   365

Ser Ala Asp Gly Glu Tyr Ile Gln Met Gln Leu Thr Leu Leu Val Gly
     370   375   380

Asn His Thr Gln Arg Thr Ala Ile Leu Gly Leu Trp Lys Ile Ala Arg
385   390   395   400

Lys Trp Met Arg Arg Lys Met Gly Lys Trp Pro Ala Val Val Val Met
              405   410   415
Gly Trp Pro

<210> 4923

<211> 699

<212> PRT

<213> Homo sapiens

<400> 4923

Met Asn Thr Phe Gln Ala Ser Val Ser Phe Gln Asp Val Thr Val Glu
 1   5   10   15
Phe Ser Gln Glu Glu Trp Gln His Met Gly Pro Val Glu Arg Thr Leu
               20   25   30
Tyr Arg Asp Val Met Leu Glu Asn Tyr Ser His Leu Val Ser Val Gly
              35   40   45
Tyr Cys Phe Thr Lys Pro Glu Leu Ile Phe Thr Leu Glu Gln Gly Glu
   50   55   60
Asp Pro Trp Leu Leu Glu Lys Glu Lys Gly Phe Leu Ser Arg Asn Ser
65   70   75   80
Pro Glu Asp Ser Gln Pro Asp Glu Ile Ser Glu Lys Ser Pro Glu Asn
               85   90   95
Gln Gly Lys His Leu Leu Gln Val Leu Phe Thr Asn Lys Leu Leu Thr
              100   105   110
Thr Glu Gln Glu Ile Ser Gly Lys Pro His Asn Arg Asp Ile Asn Ile
              115   120   125
Phe Arg Ala Arg Met Met Pro Cys Lys Cys Asp Ile Ala Gly Ser Ala
   130   135   140
Cys Gln Gly Leu Ser Leu Met Ala Pro His Cys Gln Tyr Ser Lys Glu
145   150   155   160
Lys Ala His Glu Arg Asn Val Cys Asp Lys Trp Leu Ile Ser Ile Lys
              165   170   175
Asp Gly Arg Thr Asn Thr Gln Glu Lys Ser Phe Ala Tyr Ser Lys Ile
              180   185   190

Val Lys Thr Leu His His Lys Glu Glu Val Ile Gln His Gln Thr Ile
    195   200   205

Gln Thr Leu Gly Gln Asp Phe Glu Tyr Asn Glu Ser Arg Lys Ala Phe
    210   215   220

Leu Glu Lys Ala Ala Leu Val Thr Ser Asn Ser Thr His Pro Lys Gly
225   230   235   240

Lys Ser Tyr Asn Phe Asn Lys Phe Gly Glu Asn Lys Tyr Asp Lys Ser
           245   250   255

Thr Phe Ile Ile Pro Gln Asn Met Asn Pro Glu Lys Ser His Tyr Glu
           260   265   270

Phe Asn Asp Thr Gly Asn Cys Phe Cys Arg Ile Thr His Lys Thr Leu
           275   280   285

Thr Gly Gly Lys Ser Phe Ser Gln Lys Ser His Ile Arg Glu His His
    290   295   300

Arg Val His Ile Gly Val Lys Pro Phe Glu Tyr Gly Lys Ser Phe Asn
305   310   315   320

Arg Asn Ser Thr Leu Pro Val His Gln Arg Thr His Ala Thr Asp Lys
           325   330   335

Tyr Ser Asp Tyr His Pro Cys Thr Glu Thr Phe Ser Tyr Gln Ser Thr
           340   345   350

Phe Ser Val His Gln Lys Val His Ile Arg Ala Lys Pro Tyr Glu Tyr
           355   360   365

Asn Glu Cys Gly Lys Ser Cys Ser Met Asn Ser His Leu Ile Trp Pro
    370   375   380

Gln Lys Ser His Thr Gly Glu Lys Pro Tyr Glu Cys Pro Glu Cys Gly
385   390   395   400

Lys Ala Phe Ser Glu Lys Ser Arg Leu Arg Lys His Gln Arg Thr His
           405   410   415

Thr Gly Glu Lys Pro Tyr Lys Cys Asp Gly Cys Asp Lys Ala Phe Ser
           420   425   430

Ala Lys Ser Gly Leu Arg Ile His Gln Arg Thr His Thr Gly Glu Lys
           435   440   445

Pro Phe Glu Cys His Glu Cys Gly Lys Ser Phe Asn Tyr Lys Ser Ile
    450   455   460

Leu Ile Val His Gln Arg Thr His Thr Gly Glu Lys Pro Phe Glu Cys
465   470   475   480

Asn Glu Cys Gly Lys Ser Phe Ser His Met Ser Gly Leu Arg Asn His
                485   490   495

Arg Arg Thr His Thr Gly Glu Arg Pro Tyr Lys Cys Asp Glu Cys Gly
                500   505   510

Lys Ala Phe Lys Leu Lys Ser Gly Leu Arg Lys His His Arg Thr His
                515   520   525

Thr Gly Glu Lys Pro Tyr Lys Cys Asn Gln Cys Gly Lys Ala Phe Gly
            530   535   540

Gln Lys Ser Gln Leu Arg Gly His His Arg Ile His Thr Gly Glu Lys
545   550   555   560

Pro Tyr Lys Cys Asn His Cys Gly Glu Ala Phe Ser Gln Lys Ser Asn
                565   570   575

Leu Arg Val His His Arg Thr His Thr Gly Glu Lys Pro Tyr Gln Cys
                580   585   590

Glu Glu Cys Gly Lys Thr Phe Arg Gln Lys Ser Asn Leu Arg Gly His
                595   600   605

Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly
            610   615   620

Lys Ala Phe Ser Glu Lys Ser Val Leu Arg Lys His Gln Arg Thr His
625   630   635   640

Thr Gly Glu Lys Pro Tyr Asn Cys Asn Gln Cys Gly Glu Ala Phe Ser
                645   650   655

Gln Lys Ser Asn Leu Arg Val His Gln Arg Thr His Thr Gly Glu Lys
                660   665   670

Pro Tyr Lys Cys Asp Lys Cys Gly Arg Thr Phe Ser Gln Lys Ser Ser
            675   680   685

Leu Arg Glu His Gln Lys Ala His Pro Gly Asp
    690   695

<210> 4924

<211> 319

<212> PRT

<213> Homo sapiens

<400> 4924

Met Glu Tyr Pro Ala Pro Ala Thr Val Gln Ala Ala Asp Gly Gly Ala
1   5   10   15

Ala Gly Pro Tyr Ser Ser Ser Glu Leu Leu Glu Gly Gln Glu Pro Asp
              20   25   30

Gly Val Arg Phe Asp Arg Glu Arg Ala Arg Arg Leu Trp Glu Ala Val
          35   40   45

Ser Gly Ala Gln Pro Val Gly Arg Glu Glu Ala Gln Phe Phe Pro His
      50   55   60

Ser Arg Thr Val Ile Pro Ile Leu Val Leu Ser Glu Thr Tyr Ser Leu
65   70   75   80

Cys His Pro Val Glu His Met Ile Gln Lys Asn Gln Cys Leu Phe Thr
              85   90   95

Asn Thr Gln Cys Lys Val Cys Cys Ala Leu Leu Ile Ser Glu Ser Gln
              100   105   110

Lys Leu Ala His Tyr Gln Ser Lys Lys His Ala Asn Lys Val Lys Arg
              115   120   125

Tyr Leu Ala Ile His Gly Met Glu Thr Leu Lys Gly Glu Thr Lys Lys
      130   135   140

Leu Asp Ser Asp Gln Lys Ser Ser Arg Ser Lys Asp Lys Asn Gln Cys
145   150   155   160

Cys Pro Ile Cys Asn Met Thr Phe Ser Ser Pro Val Val Ala Gln Ser
              165   170   175

His Tyr Leu Gly Lys Thr His Ala Lys Asn Leu Lys Leu Lys Gln Gln
              180   185   190

Ser Thr Lys Val Glu Ala Leu His Gln Asn Arg Glu Met Ile Asp Pro
              195   200   205

Asp Lys Phe Cys Ser Leu Cys His Ala Thr Phe Asn Asp Pro Val Met
      210   215   220

Ala Gln Gln His Tyr Val Gly Lys Lys His Arg Lys Gln Glu Thr Lys
225   230   235   240

Leu Lys Leu Met Ala Arg Tyr Gly Arg Leu Ala Asp Pro Ala Val Thr
              245   250   255

Asp Phe Pro Ala Gly Lys Gly Tyr Pro Cys Lys Thr Cys Lys Ile Val
              260   265   270

Leu Asn Ser Ile Glu Gln Tyr Gln Ala His Val Ser Gly Phe Lys His

```
              275                     280                     285
Lys Asn Gln Ser Pro Lys Thr Val Ala Ser Ser Leu Gly Gln Ile Pro
      290                     295                     300
Met Gln Arg Gln Pro Ile Gln Lys Asp Ser Thr Thr Leu Glu Asp


305                     310                     315
```

<210> 4925

<211> 458

<212> PRT

<213> Homo sapiens

<400> 4925

```
Met Glu Ser Asn Phe Asn Thr Glu Ser Ser Ser Thr Phe Thr Leu Gln
  1               5                  10                  15
Ser Ser Ser Glu Thr Leu Phe Ser Ile Gln Leu Leu Asp Phe Lys Thr
              20                  25                  30
Ser Leu Leu Glu Ala Leu Glu Glu Leu Arg Met Arg Arg Glu Ala Glu
          35                  40                  45
Ile His Tyr Glu Glu Gln Ile Gly Lys Ile Ile Val Glu Thr Gln Glu
          50                  55                  60
Leu Lys Trp Gln Lys Glu Thr Leu Gln Asn Gln Lys Glu Thr Leu Ala
 65                  70                  75                  80
Glu Gln His Lys Glu Ala Met Ala Val Phe Lys Lys Gln Leu Gln Met
              85                  90                  95
Lys Met Cys Ala Leu Glu Glu Glu Lys Gly Lys Tyr Gln Leu Ala Thr
              100                 105                 110
Glu Ile Lys Glu Lys Glu Ile Glu Gly Leu Lys Glu Thr Leu Lys Ala
              115                 120                 125
Leu Gln Val Ser Lys Tyr Ser Leu Gln Lys Lys Val Ser Glu Met Glu
          130                 135                 140
Gln Lys Val Gln Leu His Leu Leu Ala Lys Glu Asp Tyr His Lys Gln
145                 150                 155                 160
Leu Ser Glu Ile Glu Lys Tyr Tyr Ala Thr Ile Thr Gly Gln Phe Gly
              165                 170                 175
```

Leu Val Lys Glu Asn His Glu Lys Leu Glu Gln Asn Val Arg Glu Ala
      180   185   190

Ile Gln Ser Asn Lys Arg Leu Ser Ala Leu Asn Lys Lys Gln Glu Ala
      195   200   205

Glu Ile Cys Ser Leu Lys Lys Glu Leu Lys Lys Ala Ala Ser Asp Leu
      210   215   220

Ile Lys Ser Lys Val Thr Cys Gln Tyr Lys Met Gly Glu Glu Asn Ile
225   230   235   240

Asn Leu Thr Ile Lys Glu Gln Lys Phe Gln Glu Leu Gln Glu Arg Leu
            245   250   255

Asn Met Glu Leu Glu Leu Asn Glu Lys Ile Asn Glu Glu Ile Thr His
            260   265   270

Ile Gln Glu Glu Lys Gln Asp Ile Ile Ile Ser Phe Gln His Met Gln
            275   280   285

Gln Leu Leu Arg Gln Gln Ile Gln Ala Asn Thr Glu Met Glu Ala Glu
      290   295   300

Leu Lys Val Leu Lys Glu Asn Asn Gln Thr Leu Glu Arg Asp Asn Glu
305   310   315   320

Leu Gln Arg Glu Lys Val Lys Glu Asn Glu Glu Lys Phe Leu Asn Leu
            325   330   335

Gln Asn Glu His Glu Lys Ala Leu Gly Thr Trp Lys Arg His Ala Glu
            340   345   350

Glu Leu Asn Gly Glu Ile Asn Lys Ile Lys Asn Glu Leu Ser Ser Leu
            355   360   365

Lys Glu Thr His Ile Glu Leu Gln Glu His Tyr Asn Lys Leu Cys Asn
      370   375   380

Gln Lys Thr Phe Glu Glu Asp Lys Lys Phe Gln Asn Val Pro Glu Val
385   390   395   400

Asn Asn Glu Asn Ser Glu Met Ser Thr Glu Lys Ser Glu Asn Thr Ile
            405   410   415

Ile Gln Lys Tyr Asn Thr Glu Gln Glu Ile Arg Glu Glu Asn Met Glu
            420   425   430

Asn Phe Cys Ser Asp Thr Glu Tyr Arg Glu Lys Glu Glu Lys Lys Arg
      435   440   445

Arg Leu Ile Tyr Arg Gly Asn Asn Tyr Arg
      450   455

<210> 4926

<211> 814

<212> PRT

<213> Homo sapiens

<400> 4926

```
Met Val Lys Gln Thr Ile Gln Ile Phe Ala Arg Val Lys Pro Pro Val
1               5                   10                  15
Arg Lys His Gln Gln Gly Ile Tyr Ser Ile Asp Glu Asp Glu Lys Leu
                20                  25                  30
Ile Pro Ser Leu Glu Ile Ile Leu Pro Arg Asp Leu Ala Asp Gly Phe
            35                  40                  45
Val Asn Asn Lys Arg Glu Ser Tyr Lys Phe Lys Phe Gln Arg Ile Phe
        50                  55                  60
Asp Gln Asp Ala Asn Gln Glu Thr Val Phe Glu Asn Ile Ala Lys Pro
65                  70                  75                  80
Val Ala Gly Ser Val Leu Ala Gly Tyr Asn Gly Thr Ile Phe Ala Tyr
                85                  90                  95
Gly Gln Thr Gly Ser Gly Lys Thr Phe Thr Ile Thr Gly Gly Ala Glu
                100                 105                 110
Arg Tyr Ser Asp Arg Gly Ile Ile Pro Arg Thr Leu Ser Tyr Ile Phe
            115                 120                 125
Glu Gln Leu Gln Lys Asp Ser Ser Lys Ile Tyr Thr Thr His Ile Ser
        130                 135                 140
Tyr Leu Glu Ile Tyr Asn Glu Cys Gly Tyr Asp Leu Leu Asp Pro Arg
145                 150                 155                 160
His Glu Ala Ser Ser Leu Glu Asp Leu Pro Lys Val Thr Ile Leu Glu
                165                 170                 175
Asp Pro Asp Gln Asn Ile His Leu Lys Asn Leu Thr Leu His Gln Ala
                180                 185                 190
Thr Thr Glu Glu Glu Ala Leu Asn Leu Leu Phe Leu Gly Asp Thr Asn
            195                 200                 205
Arg Met Ile Ala Glu Thr Pro Met Asn Gln Ala Ser Thr Arg Ser His
        210                 215                 220
```

Cys Ile Phe Thr Ile His Leu Ser Ser Lys Glu Pro Gly Ser Ala Thr
225   230   235   240

Val Arg His Ala Lys Leu His Leu Val Asp Leu Ala Gly Ser Glu Arg
                245   250   255

Val Ala Lys Thr Gly Val Gly Gly His Leu Leu Thr Glu Ala Lys Tyr
                260   265   270

Ile Asn Leu Ser Leu His Tyr Leu Glu Gln Val Ile Ile Ala Leu Ser
                275   280   285

Glu Lys His Arg Ser His Ile Pro Tyr Arg Asn Ser Met Met Thr Ser
                290   295   300

Val Leu Arg Asp Ser Leu Gly Gly Asn Cys Met Thr Thr Met Ile Ala
305   310   315   320

Thr Leu Ser Leu Glu Lys Arg Asn Leu Asp Glu Ser Ile Ser Thr Cys
                325   330   335

Arg Phe Ala Gln Arg Val Ala Leu Ile Lys Asn Glu Ala Val Leu Asn
                340   345   350

Glu Glu Ile Asn Pro Arg Leu Val Ile Lys Arg Leu Gln Lys Glu Ile
                355   360   365

Gln Glu Leu Lys Asp Glu Leu Ala Met Val Thr Gly Glu Gln Arg Thr
                370   375   380

Glu Ala Leu Thr Glu Ala Glu Leu Leu Gln Leu Glu Lys Leu Ile Thr
385   390   395   400

Ser Phe Leu Glu Asp Gln Asp Ser Asp Ser Arg Leu Glu Val Gly Ala
                405   410   415

Asp Met Arg Lys Val His His Cys Phe His His Leu Lys Lys Leu Leu
                420   425   430

Asn Asp Lys Lys Ile Leu Glu Asn Asn Thr Val Ser Ser Glu Ser Lys
                435   440   445

Asp Gln Asp Cys Gln Glu Pro Leu Lys Glu Glu Glu Tyr Arg Lys Leu
                450   455   460

Arg Asp Ile Leu Lys Gln Arg Asp Asn Glu Ile Asn Ile Leu Val Asn
465   470   475   480

Met Leu Lys Lys Glu Lys Lys Lys Ala Gln Glu Ala Leu His Leu Ala
                485   490   495

Gly Met Asp Arg Arg Glu Phe Arg Gln Ser Gln Ser Pro Pro Phe Arg
                500   505   510

Leu Gly Asn Pro Glu Glu Gly Gln Arg Met Arg Leu Ser Ser Ala Pro
        515   520   525

Ser Gln Ala Gln Asp Phe Ser Ile Leu Gly Lys Arg Ser Ser Leu Leu
        530   535   540

His Lys Lys Ile Gly Met Lys Glu Glu Met Ser Leu Gly Cys Gln Glu
545   550   555   560

Ala Phe Glu Ile Phe Lys Arg Asp His Ala Asp Ser Val Thr Ile Asp
            565   570   575

Asp Asn Lys Gln Ile Leu Lys Gln Arg Phe Ser Glu Ala Lys Ala Leu
        580   585   590

Gly Glu Ser Ile Asn Glu Ala Arg Ser Lys Ile Gly His Leu Lys Glu
        595   600   605

Glu Ile Thr Gln Arg His Ile Gln Gln Val Ala Leu Gly Ile Ser Glu
        610   615   620

Asn Met Ala Val Pro Leu Met Pro Asp Gln Gln Glu Glu Lys Leu Arg
625   630   635   640

Ser Gln Leu Glu Glu Glu Lys Arg Arg Tyr Lys Thr Met Phe Thr Arg
            645   650   655

Leu Lys Ala Leu Lys Val Glu Ile Glu His Leu Gln Leu Leu Met Asp
        660   665   670

Lys Ala Lys Val Lys Leu Gln Lys Glu Phe Glu Val Trp Trp Ala Glu
        675   680   685

Glu Ala Thr Asn Leu Gln Val Asn Ser Pro Ala Val Asn Ser Leu Asp
        690   695   700

His Thr Lys Pro Phe Leu Gln Thr Ser Asp Phe Gln His Glu Arg Ser
705   .   710   715   720

Gln Leu Leu Ser Asn Lys Ser Ser Gly Gly Trp Glu Val Gln Asp Gln
            725   730   735

Gly Thr Gly Arg Phe Asp Val Cys Asp Val Asn Ala Arg Lys Ile Leu
        740   745   750

Pro Ser Pro Cys Pro Ser Pro His Ser Gln Lys Gln Ser Ser Thr Ser
        755   760   765

Thr Pro Leu Gly Asp Ser Ile Pro Lys Arg Pro Val Ser Ser Ile Pro
        770   775   780

Leu Thr Gly Asp Ser Gln Thr Asp Ser Asp Ile Ile Ala Phe Ile Lys
785   790   795   800

Ala Arg Gln Ser Ile Leu Gln Lys Gln Cys Leu Gly Ser Asn
                805   810

<210> 4927

<211> 503

<212> PRT

<213> Homo sapiens

<400> 4927

Met Gly Ala Leu Thr Phe Arg Asp Val Ala Ile Glu Phe Ser Leu Glu
 1   5   10   15
Glu Trp Gln Cys Leu Asp Thr Glu Gln Gln Asn Leu Tyr Arg Asn Val
                20   25   30
Met Leu Asp Asn Tyr Arg Asn Leu Val Phe Leu Gly Ile Ala Val Ser
                35   40   45
Lys Pro Asp Leu Ile Thr Cys Leu Glu Gln Glu Lys Glu Pro Trp Asn
            50   55   60
Leu Lys Thr His Asp Met Val Ala Lys Pro Pro Val Ile Cys Ser His
65   70   75   80
Ile Ala Gln Asp Leu Trp Pro Glu Gln Gly Ile Lys Asp Tyr Phe Gln
                85   90   95
Glu Val Ile Leu Arg Gln Tyr Lys Lys Cys Arg His Glu Asn Leu Leu
                100   105   110
Leu Arg Lys Gly Cys Lys Asn Val Asp Glu Phe Lys Met His Lys Lys
                115   120   125
Gly Tyr Asn Arg His Asn Gln Cys Leu Thr Thr Ser His Ser Lys Ile
            130   135   140
Phe Gln Cys Asp Lys Tyr Val Lys Val Phe His Lys Phe Ser Asn Ser
145   150   155   160
Asn Arg His Lys Ile Arg His Thr Ser Lys Lys Pro Phe Lys Cys Lys
                165   170   175
Glu Cys Gly Lys Leu Phe Cys Ile Leu Ser His Leu Ala Gln His Lys
                180   185   190
Lys Ile His Thr Gly Glu Lys Ser Tyr Lys Cys Glu Glu Tyr Gly Lys
                195   200   205

Ala Phe Asn Glu Ser Ser Asn Cys Thr Thr His Lys Arg Ile Thr Glu
   210   215   220

Lys Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn Trp Phe
225   230   235   240

Ser His Phe Thr Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr
        245   250   255

Gln Cys Glu Lys Cys Gly Lys Phe Phe Asn Gln Ser Thr Asn Leu Thr
       260   265   270

Thr His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu
       275   280   285

Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu Thr Glu His Lys Lys
       290   295   300

Ile His Thr Lys Glu Gln Pro Tyr Lys Cys Glu Lys Cys Gly Lys Ala
305   310   315   320

Phe Lys Trp Ser Ser Thr Leu Thr Lys His Lys Arg Ile His Asn Gly
       325   330   335

Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Asn Arg Ser
       340   345   350

Ser Thr Leu Asn Arg His Lys Ile Thr His Thr Gly Gly Lys Pro Tyr
       355   360   365

Lys Tyr Lys Glu Cys Gly Lys Ala Phe Asn Gln Ser Ser Thr Leu Thr
       370   375   380

Ile His Lys Ile Ile His Thr Val Glu Lys Phe Tyr Lys Cys Glu Glu
385   390   395   400

Cys Gly Lys Ala Phe Ser Arg Ile Ser His Leu Thr Thr His Lys Arg
       405   410   415

Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Arg Ala
       420   425   430

Phe Asn Gln Ser Ser Thr Leu Thr Thr His Lys Arg Ile His Thr Gly
       435   440   445

Glu Lys Pro Tyr Glu Cys Glu Glu Cys Gly Lys Ala Phe Asn Arg Ser
       450   455   460

Ser Thr Leu Thr Thr His Lys Ile Ile His Ser Gly Glu Lys Ile Tyr
465   470   475   480

Lys Cys Lys Glu Cys Gly Lys Ala Phe Arg Arg Phe Ser His Leu Thr
       485   490   495

Arg His Lys Thr Ile His Thr
            500

<210> 4928

<211> 388

<212> PRT

<213> Homo sapiens

<400> 4928

Met Leu Leu Lys Glu Lys Glu Asp Ser Leu Met Thr Cys Gln Gln Ile
  1   5   10   15

Tyr Lys Ala Leu Gln Glu Glu Leu Thr Val Lys Glu Lys Gln Glu Glu
            20   25   30

Asp Ile Lys Arg Arg Ile Asn Leu Ala Glu Asn Glu Leu Glu Ile Thr
            35   40   45

Lys Thr Leu Leu Asn Gln Thr Arg Glu Glu Val Leu Thr Leu Lys Asn
         50   55   60

Glu Arg Glu Leu Met Leu Ile Ser His Gln Lys Ser Ile Glu Gln Leu
65   70   75   80

Gln Glu Thr Leu Arg Gln Lys Leu Leu Ser Asp Asp Asn Trp Lys Glu
            85   90   95

Lys Ile Glu Ala Glu Leu Ala Lys Glu Arg Ala Gln His Leu Val Glu
            100   105   110

Phe Glu Glu Gln Ala Leu Leu Phe Lys Glu Glu Thr Lys Leu Gln Leu
         115   120   125

Asp Ile Glu Lys Glu Lys His Gln Asp Val Ile Gln Lys Tyr Lys Lys
         130   135   140

Glu Gln Glu Glu Leu Gln Met Lys Ile Ser Asp Leu Ile Thr Gly Ala
145   150   155   160

Thr Arg Asp Leu Arg Gln Glu Val Thr Thr Leu Lys Glu Lys Leu His
            165   170   175

Lys Ser His Thr Arg Tyr Thr Glu Glu Ser Asn Ser Lys Glu Lys Glu
         180   185   190

Ile Glu Asn Leu Lys Asn Leu Val Ala Glu Phe Glu Ser Arg Leu Lys
         195   200   205

Lys Glu Ile Asp Ser Asn Asp Ser Val Ser Glu Asn Leu Arg Lys Glu
    210   215   220

Met Glu Gln Lys Ser Asp Glu Leu Lys Arg Val Met Leu Ala Gln Thr
225   230   235   240

Gln Leu Ile Glu Gln Phe Asn Gln Ser Gln Glu Glu Asn Thr Phe Leu
         245   250   255

Gln Glu Thr Val Arg Arg Glu Cys Glu Glu Arg Phe Glu Leu Thr Glu
        260   265   270

Ala Leu Ser Gln Ala Arg Glu Gln Leu Leu Glu Leu Ser Lys Leu Arg
        275   280   285

Gly Ser Leu Pro Phe Ser Pro Cys Ser Leu Ser Lys Gly Ser Leu Thr
        290   295   300

Ser Pro Ala Ala Ala Val Ser Asn His Gly Glu Arg Ser Leu Ala Arg
305   310   315   320

Leu Asn Ser Glu Lys Gly Ile Gln Ile Pro Asn Leu Arg Gly Val Ser
        325   330   335

Lys Pro Thr Thr Phe Pro Thr Ser Asp Lys Pro Lys Arg Val Arg Ser
        340   345   350

Gly Val Pro Ile Leu Pro Gln Pro His Pro Pro Arg Gly Gly Ala Ser
        355   360   365

Ser Ala Asn Glu Thr Arg Gln Arg Leu Ala Ala Ile Leu Arg Arg Arg
        370   375   380

Arg Ser Gln Gln
385

<210> 4929

<211> 165

<212> PRT

<213> Homo sapiens

<400> 4929

Met Asp Gly Pro Ala Thr Pro Val Ser Thr Asp Ser Asn Pro Pro Thr
  1   5   10   15

Gln Gln Glu Asp Arg Ser Ala Cys Lys Cys Thr His Leu Glu Lys Arg
        20   25   30

Leu Phe Pro Leu Leu Leu Val Ala Gln Leu Leu Leu Ser Pro Pro Gly
        35   40   45

Ala Ala Ala Val Lys Cys Gln Leu Asp Pro Ala Lys Trp Gln Asp Pro
        50   55   60

Gln His Ser Ser Ile Cys Ser Val Leu His Leu Arg His Trp Lys Gly
65   70   75   80

Cys Glu Pro Asp Ile Gly Ser Gln Ser Thr Cys Phe Pro Glu Pro Glu
                85   90   95

Ser Cys Leu Pro Val Ala Ala Asp Thr Asp Ser Asn Val Thr Pro Ala
                100   105   110

Thr Gln Gln Gln Arg Cys Cys Thr Leu Ala Cys Asn Leu Gly Thr Gly
        115   120   125

Pro Leu His Leu Leu Leu Ser Leu Leu Met Gln Leu Gly Ala Arg Ala
        130   135   140

Cys Ala Thr Gly Ser Asp Leu Thr Ser Thr Ser Ser Arg Ala Thr Val
145   150   155   160

Asn Leu His Val Pro
                165

<210> 4930

<211> 832

<212> PRT

<213> Homo sapiens

<400> 4930

Met Ala Gly Leu Arg Tyr Ser Val Lys Val Tyr Val Leu Asn Glu Asp
 1   5   10   15

Glu Glu Trp Asn Asn Leu Gly Thr Gly Gln Val Ser Ser Thr Tyr Asp
                20   25   30

Glu Gln Phe Gln Gly Met Ser Leu Leu Val Arg Ser Asp Ser Asp Gly
        35   40   45

Ser Val Ile Leu Arg Ser Gln Ile Pro Pro Asp Arg Pro Tyr Gly Lys
        50   55   60

Tyr Gln Glu Thr Leu Ile Val Trp Tyr Glu Ala Glu Asn Gln Gly Leu
65   70   75   80

Val Leu Lys Phe Gln Asp Pro Ala Gly Cys Gln Asp Ile Trp Lys Glu
              85   90   95

Ile Cys Gln Ala Gln Gly Lys Asp Pro Ser Ile Gln Thr Thr Val Asn
              100   105   110

Ile Ser Asp Glu Pro Glu Glu Asp Phe Asn Glu Met Ser Val Ile Ser
              115   120   125

Asn Met Val Val Leu Pro Asp Cys Glu Leu Asn Thr Leu Asp Gln Ile
        130   135   140

Ala Asp Ile Val Thr Ser Val Phe Ser Ser Pro Val Thr Asp Arg Glu
145   150   155   160

Arg Leu Ala Glu Ile Leu Lys Asn Glu Ala Tyr Ile Pro Lys Leu Leu
              165   170   175

Gln Leu Phe His Thr Cys Glu Asn Leu Glu Asn Thr Glu Gly Leu His
              180   185   190

His Leu Tyr Glu Ile Ile Lys Gly Ile Leu Phe Leu Asn Glu Ala Cys
              195   200   205

Leu Phe Glu Ile Met Phe Ser Asp Glu Cys Ile Met Asp Val Val Gly
        210   215   220

Cys Leu Glu Tyr Asp Pro Ala Leu Asp Gln Pro Lys Arg His Arg Asp
225   230   235   240

Phe Leu Thr Asn Asp Ala Lys Phe Lys Glu Val Ile Pro Ile Thr Asn
              245   250   255

Ser Glu Leu Arg Gln Lys Ile His Gln Thr Tyr Arg Leu Gln Tyr Ile
              260   265   270

Tyr Asp Ile Leu Leu Pro Val Pro Ser Ile Phe Glu Asp Asn Phe Leu
              275   280   285

Ser Thr Leu Thr Thr Phe Ile Phe Ser Asn Lys Ala Glu Ile Val Ser
        290   295   300

Met Leu Gln Lys Asp His Lys Phe Leu Tyr Glu Val Phe Ala Gln Leu
305   310   315   320

Lys Asp Glu Thr Thr His Asp Asp Arg Arg Cys Glu Leu Leu Phe Phe
              325   330   335

Phe Lys Glu Leu Cys Ser Phe Ser Gln Ala Leu Gln Pro Gln Ser Lys
              340   345   350

Asp Ala Leu Phe Glu Thr Leu Ile Gln Leu Gly Val Leu Pro Ala Leu
        355   360   365

Lys Ile Val Met Ile Arg Asp Asp Leu Gln Val Arg Ser Ala Ala Ala
    370   375   380

Val Ile Cys Ala Tyr Leu Val Glu Tyr Ser Pro Ser Arg Ile Arg Glu
385   390   395   400

Phe Ile Ile Ser Glu Ala His Val Cys Lys Asp Ile Tyr Leu Phe Ile
                405   410   415

Asn Val Ile Ile Lys Gln Met Ile Cys Asp Thr Asp Pro Glu Leu Gly
                420   425   430

Gly Ala Val His Leu Met Val Val Leu His Thr Leu Leu Asp Pro Arg
                435   440   445

Asn Met Leu Thr Thr Pro Glu Lys Ser Glu Arg Ser Glu Phe Leu His
    450   455   460

Phe Phe Tyr Lys His Cys Met His Lys Phe Thr Ala Pro Leu Leu Ala
465   470   475   480

Ala Thr Ser Glu His Asn Cys Glu Glu Asp Asp Ile Ala Gly Tyr Asp
                485   490   495

Lys Ser Lys Asn Cys Pro Asn Asp Asn Gln Thr Ala Gln Leu Leu Ala
                500   505   510

Leu Ile Leu Glu Leu Leu Thr Phe Cys Ile Gln His His Thr Phe Tyr
                515   520   525

Ile Arg Ser Tyr Ile Leu Asn Lys Asp Leu Leu Arg Lys Ala Leu Ile
    530   535   540

Leu Met Asn Ser Lys His Thr His Leu Ile Leu Cys Val Leu Arg Phe
545   550   555   560

Met Arg Arg Met Ile Cys Leu Asn Asp Glu Ala Tyr Asn Asn Tyr Ile
                565   570   575

Ile Lys Gly Asn Leu Phe Glu Pro Val Val Asn Ala Leu Leu Asp Asn
                580   585   590

Gly Thr Arg Tyr Asn Met Leu Asn Ser Ala Ile Leu Glu Leu Phe Glu
                595   600   605

Tyr Ile Arg Val Glu Asn Ile Lys Pro Leu Val Ser His Ile Val Glu
    610   615   620

Lys Phe Tyr Asn Thr Leu Glu Ser Ile Glu Tyr Val Gln Thr Phe Lys
625   630   635   640

Gly Leu Lys Ile Lys Tyr Glu Lys Glu Arg Asp Arg Gln Ser Gln Ile
                645   650   655

Gln Lys Asn Leu His Ser Val Leu Gln Asn Ile Val Val Phe Arg Gly
          660   665   670

Thr Ile Glu Glu Ile Gly Leu Glu Glu Glu Ile Cys Phe Met Glu Asp
         675   680   685

Ala Gly Glu Ala Val Met Pro Pro Leu Glu Asp Asp Asp Glu Phe Met
      690   695   700

Glu Thr Lys Arg Thr Gln Glu Gly Glu Ala Val Met Pro Pro Leu Glu
705   710   715   720

Asp Asp Asp Lys Phe Thr Glu Thr Lys Arg Thr His Gln Glu Gly Glu
          725   730   735

Ala Val Met Pro Pro Leu Glu Asp Asp Asp Glu Phe Met Glu Thr Lys
          740   745   750

Arg Asn Gln Glu His Glu Gly Lys Val Asp Ser Pro Lys Arg Thr Ser
          755   760   765

Ser Gly Asp Phe Lys Phe Ser Ser Ser Tyr Ser Ala Cys Ala Ala Ile
          770   775   780

Gly Thr Gly Ser Pro Ser Gly Ser Ser Val Val Arg Leu Val Asp His
785   790   795   800

Pro Asp Asp Glu Glu Glu Lys Glu Glu Asp Glu Glu Glu Lys Glu Glu
          805   810   815

Asp Lys Glu Asp Glu Thr Ser Pro Lys Lys Lys Pro His Leu Ser Ser
          820   825   830

<210> 4931

<211> 250

<212> PRT

<213> Homo sapiens

<400> 4931

Met Phe His Gly Thr Val Thr Glu Glu Leu Thr Ser His Glu Glu Trp
1   5   10   15

Ser His Tyr Asn Glu Asn Ile Arg Glu Gly Gln Lys Asp Phe Val Phe
          20   25   30

Val Lys Phe Asn Gly Leu His Leu Lys Ser Met Glu Asn Leu Gln Ser
          35   40   45

Cys Ile Ser Leu Arg Val Cys Ile Phe Ser Asn Asn Phe Ile Thr Asp
        50   55   60

Ile His Pro Leu Gln Ser Cys Ile Lys Leu Ile Lys Leu Asp Leu His
65   70   75   80

Gly Asn Gln Ile Lys Ser Leu Pro Asn Thr Lys Phe Trp Asn Gly Leu
                    85   90   95

Lys Asn Leu Lys Leu Leu Tyr Leu His Asp Asn Gly Phe Ala Lys Leu
                    100   105   110

Lys Asn Ile Cys Val Leu Ser Ala Cys Pro Thr Leu Ile Ala Leu Thr
                    115   120   125

Met Phe Asp Cys Pro Val Ser Leu Lys Lys Gly Tyr Arg His Val Leu
        130   135   140

Val Asn Ser Ile Trp Pro Leu Lys Ala Leu Asp His His Val Ile Ser
145   150   155   160

Asp Glu Glu Ile Ile Gln Asn Trp His Leu Pro Glu Arg Phe Lys Ala
                    165   170   175

Cys Asn His Arg Leu Phe Phe Asn Phe Cys Pro Ala Leu Arg Lys Gly
                    180   185   190

Thr Thr Tyr Glu Glu Glu Ile Asn Asn Ile Lys His Ile Thr Ser Lys
                    195   200   205

Ile Asn Ala Ile Leu Ala His Asn Ser Pro Val Leu Ile Val Gln Arg
        210   215   220

Trp Ile Arg Gly Phe Leu Val Arg Lys Asn Leu Ser Pro Val Phe Phe
225   230   235   240

His Lys Lys Lys Thr Ala Gly Lys Asn Tyr
                    245   250

<210> 4932
<211> 788
<212> PRT
<213> Homo sapiens

<400> 4932
Met Ala Cys Leu Thr His Arg Asn Glu Thr Asp Ala Arg Met Glu Phe
    1   5   10   15

Tyr Ser Leu Phe His Lys Gly Asn Lys Ala Gly Val Gln Trp His Asp
          20   25   30

Leu Gly Ser Leu Gln Pro Leu Pro Pro Arg Phe Lys Arg Phe Ser Cys
          35   40   45

Leu Ser Leu Gln Ser Ser Trp Asp Tyr Ser Leu Ser Lys Phe Asp Glu
     50   55   60

Arg Cys Cys Phe Leu Tyr Val His Asp Asn Ser Asp Asp Phe Gln Ile
65   70   75   80

Tyr Phe Ser Thr Glu Glu Gln Cys Ser Arg Phe Phe Ser Leu Val Lys
          85   90   95

Glu Met Ile Thr Asn Thr Ala Gly Ser Thr Val Glu Leu Glu Gly Glu
          100   105   110

Thr Asp Gly Asp Thr Leu Glu Tyr Glu Tyr Asp His Asp Ala Asn Gly
          115   120   125

Glu Arg Val Val Leu Gly Lys Gly Thr Tyr Gly Ile Val Tyr Ala Gly
          130   135   140

Arg Asp Leu Ser Asn Gln Val Arg Ile Ala Ile Lys Glu Ile Pro Glu
145   150   155   160

Arg Asp Ser Arg Tyr Ser Gln Pro Leu His Glu Glu Ile Ala Leu His
          165   170   175

Lys Tyr Leu Lys His Arg Asn Ile Val Gln Tyr Leu Gly Ser Val Ser
          180   185   190

Glu Asn Gly Tyr Ile Lys Ile Phe Met Glu Gln Val Pro Gly Gly Ser
          195   200   205

Leu Ser Ala Leu Leu Arg Ser Lys Trp Gly Pro Met Lys Glu Pro Thr
     210   215   220

Ile Lys Phe Tyr Thr Lys Gln Ile Leu Glu Gly Leu Lys Tyr Leu His
225   230   235   240

Glu Asn Gln Ile Val His Arg Asp Ile Lys Gly Asp Asn Val Leu Val
          245   250   255

Asn Thr Tyr Ser Gly Val Val Lys Ile Ser Asp Leu Gly Thr Ser Lys
          260   265   270 .

Arg Leu Ala Gly Val Asn Pro Cys Thr Glu Thr Phe Thr Gly Thr Leu
          275   280   285

Gln Tyr Met Ala Pro Glu Ile Ile Asp Gln Gly Pro Arg Gly Tyr Gly
          290   295   300

Ala Pro Ala Asp Ile Trp Ser Leu Gly Cys Thr Ile Ile Glu Met Ala
305   310   315   320

Thr Ser Lys Pro Pro Phe His Glu Leu Gly Glu Pro Gln Ala Ala Met
                325   330   335

Phe Lys Val Gly Met Phe Lys Ile His Pro Glu Ile Pro Glu Ala Leu
                340   345   350

Ser Ala Glu Ala Arg Ala Phe Ile Leu Ser Cys Phe Glu Pro Asp Pro
                355   360   365

His Lys Arg Ala Thr Thr Ala Glu Leu Leu Arg Glu Gly Phe Leu Arg
                370   375   380

Gln Val Asn Lys Gly Lys Lys Asn Arg Ile Ala Phe Lys Pro Ser Glu
385   390   395   400

Gly Pro Arg Gly Val Val Leu Ala Leu Pro Thr Gln Gly Glu Pro Met
                405   410   415

Ala Thr Ser Ser Ser Glu His Gly Ser Val Ser Pro Asp Ser Asp Ala
                420   425   430

Gln Pro Asp Ala Leu Phe Glu Arg Thr Arg Ala Pro Arg His His Leu
                435   440   445

Gly His Leu Leu Ser Val Pro Asp Glu Ser Ser Ala Leu Glu Asp Arg
                450   455   460

Gly Leu Ala Ser Ser Pro Glu Asp Arg Asp Gln Gly Leu Phe Leu Leu
465   470   475   480

Arg Lys Asp Ser Glu Arg Arg Ala Ile Leu Tyr Lys Ile Leu Trp Glu
                485   490   495

Glu Gln Asn Gln Val Ala Ser Asn Leu Gln Glu Cys Val Ala Gln Ser
                500   505   510

Ser Glu Glu Leu His Leu Ser Val Gly His Ile Lys Gln Ile Ile Gly
                515   520   525

Ile Leu Arg Asp Phe Ile Arg Ser Pro Glu His Arg Val Met Ala Thr
                530   535   540

Thr Ile Ser Lys Leu Lys Val Asp Leu Asp Phe Asp Ser Ser Ser Ile
545   550   555   560

Ser Gln Ile His Leu Val Leu Phe Gly Phe Gln Asp Ala Val Asn Lys
                565   570   575

Ile Leu Arg Asn His Leu Ile Arg Pro His Trp Met Phe Ala Met Asp
                580   585   590

Asn Ile Ile Arg Arg Ala Val Gln Ala Ala Val Thr Ile Leu Ile Pro
     595   600   605

Glu Leu Arg Ala His Phe Glu Pro Thr Cys Glu Thr Glu Gly Val Asp
     610   615   620

Lys Asp Met Asp Glu Ala Glu Glu Gly Tyr Pro Pro Ala Thr Gly Pro
625   630   635   640

Gly Gln Glu Ala Gln Pro His Gln Gln His Leu Ser Leu Gln Leu Gly
           645   650   655

Glu Leu Arg Gln Glu Thr Asn Arg Leu Leu Glu His Leu Val Glu Lys
     660   665   670

Glu Arg Glu Tyr Gln Asn Leu Leu Arg Gln Thr Leu Glu Gln Lys Thr
     675   680   685

Gln Glu Leu Tyr His Leu Gln Leu Lys Leu Lys Ser Asn Cys Ile Thr
     690   695   700

Glu Asn Pro Ala Gly Pro Tyr Gly Gln Arg Thr Asp Lys Glu Leu Ile
705   710   715   720

Asp Trp Leu Arg Leu Gln Gly Ala Asp Ala Lys Thr Ile Glu Lys Ile
           725   730   735

Val Glu Glu Gly Tyr Thr Leu Ser Asp Ile Leu Asn Glu Ile Thr Lys
           740   745   750

Glu Asp Leu Arg Tyr Leu Arg Leu Arg Gly Gly Leu Leu Cys Arg Leu
           755   760   765

Trp Ser Ala Val Ser Gln Tyr Arg Arg Ala Gln Glu Ala Ser Glu Thr
           770   775   780

Lys Asp Lys Ala
785

<210> 4933

<211> 266

<212> PRT

<213> Homo sapiens

<400> 4933

Met Leu Ile Asn Val Ile Ser Gly Ser Ser Tyr Met Ile His Ser Thr
  1   5   10   15

Gln Leu Ile Glu Asn Ala Glu Leu Arg Phe His Thr Asp Glu Gln Leu
            20   25   30

Met Thr Leu Phe Met Gln Leu Gln Thr Ala Val Arg Ser Arg Met His
            35   40   45

Pro Phe Tyr Ile Thr His Ile Arg Ala His Thr Pro Leu Pro Gly Pro
        50   55   60

Leu Thr Ala Gly Asn Gln Met Ala Asp Arg Leu Val Ala Thr Ala Ile
65   70   75   80

Ser Asn Ala Arg His Phe His Asn Leu Thr Arg Val Asn Ala Ser Gly
                    85   90   95

Leu Lys Arg Arg Tyr Ser Ser Thr Arg Lys Glu Ala Lys Ala Ile Ile
            100   105   110

Gln Arg Cys Pro Thr Cys Gln Met Val His Ser Ser Ser Phe Thr Gly
            115   120   125

Gly Val Asn Pro Arg Arg Leu Glu Pro Asn Ser Leu Trp Glu Met Asp
        130   135   140

Val Thr His Val Pro Ser Phe Gly Arg Leu Ala Tyr Val His Ala Cys
145   150   155   160

Val Asp Thr Phe Ser Leu Trp Ala Ala Cys Gln Ser Gly Glu Ser Ser
                165   170   175

Ala Tyr Val Lys Arg His Leu Leu Gln Cys Phe Val Val Ile Gly Ile
            180   185   190

Leu Ala Ser Ile Lys Thr Asp Asn Ala Pro Gly Tyr Thr Ser Gln Ala
            195   200   205

Leu Ala Thr Phe Phe Ser Ile Arg Asn Ile Lys His Ile Thr Gly Ile
        210   215   220

Pro Tyr Asn Ser Gln Gly Gln Ala Ile Val Glu Arg Met Asn Leu Ser
225   230   235   240

Leu Lys Gln Gln Leu Gln Lys Gln Lys Gly Glu Asn Arg Asp Tyr Gly
                245   250   255

Thr Pro His Met Gln Leu Asn Arg Ile Ile
                260   265

<210> 4934
<211> 279

<212> PRT
<213> Homo sapiens

<400> 4934
Met Gly Thr Ser Cys Leu Pro Asp Thr Phe Thr Lys Leu Ile Asn Pro
1   5   10   15

Gln Glu Asn Thr Cys Ser Leu Glu Glu Phe Val Leu Gln Leu Glu Leu
            20   25   30

Ser Gly Tyr Ser Pro Glu Asp Leu Thr Ala Ala Leu Glu Ile Leu Glu
        35   40   45

Ala Ile Ile Ala Thr Gly Cys Phe Gly Ile Asp Lys Glu Glu Leu Arg
    50   55   60

Arg Arg Phe Ser Ala Leu Glu Lys Ala Gly Gly Gly Arg Thr Arg Thr
65   70   75   80

Phe Ala Asp Cys Ile Gln Ala Leu Leu Glu Gln His Gln Val Leu Glu
                85   90   95

Val Gly Gly Asn Thr Ala Arg Leu Val Ala Met Gly Ser Ala Trp Pro
            100   105   110

Trp Leu Leu His Ser Val Arg Leu Lys Asp Arg Glu Asp Ala Asp Ile
        115   120   125

Gln Arg Glu Asp Pro Gln Ala Arg Pro Leu Glu Gly Ser Ser Ser Glu
    130   135   140

Asp Ser Pro Pro Glu Gly Gln Ala Pro Pro Ser His Ser Pro Arg Gly
145   150   155   160

Thr Lys Arg Arg Ala Ser Trp Ala Ser Glu Asn Gly Glu Thr Asp Ala
                165   170   175

Glu Gly Thr Gln Met Thr Pro Ala Lys Arg Pro Ala Leu Gln Asp Ser
            180   185   190

Asn Leu Ala Pro Ser Leu Gly Pro Gly Ala Glu Asp Gly Ala Glu Ala
            195   200   205

Gln Ala Pro Ser Pro Pro Pro Ala Leu Glu Asp Thr Ala Ala Ala Gly
    210   215   220

Ala Ala Gln Glu Asp Gln Glu Gly Val Gly Glu Phe Ser Ser Pro Gly
225   230   235   240

Gln Glu Gln Leu Ser Gly Gln Ala Gln Pro Pro Glu Gly Ser Glu Asp
                245   250   255

Pro Arg Gly Thr Ala Arg Leu Val Pro His Pro Thr Ser Pro His Pro
            260   265   270
Gly Phe Pro Ser Pro Pro Pro
            275

<210> 4935

<211> 325

<212> PRT

<213> Homo sapiens

<400> 4935

Met Pro Ser Arg Ile Leu Asp Lys Glu Leu Leu Ser Gly Ile Pro Asp
  1   5   10   15
Thr Glu Arg Leu Ser Glu Val Val Asp Asn Arg Ala Pro Gln Arg Asp
                20   25   30
Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln
            35   40   45
Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala
         50   55   60
Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro Thr His
 65   70   75   80
Arg Pro Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Asp Pro
                85   90   95
Thr His Arg Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg
                100   105   110
Gly Pro Arg His Arg Ala Pro Gln Arg Ser Pro Arg His Arg Ala Pro
            115   120   125
Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Gly Pro Arg His Arg
            130   135   140
Ala Pro Gln Arg Asp Pro Thr His Arg Ala Pro Gln Arg Gly Pro Arg
145   150   155   160
His Arg Ala Pro Gln Arg Gly Pro Thr His Arg Ala Pro Gln Arg Gly
                165   170   175
Pro Arg His Arg Ala Pro Gln Arg Gly Pro Arg His Arg Ala Pro Gln
            180   185   190

Arg Gly Pro Thr His Arg Ala Pro Gln Arg Asp Pro Gly Trp Arg Ala
        195   200   205

Pro Gln Arg Gly Pro Thr His Arg Ala Pro Gln Arg Ile Leu Asp Ala
        210   215   220

Glu Pro Val Ser Gly Phe Leu Asp Ala Glu Ser Leu Ser Gly Ile Leu
225   230   235   240

Val Val Glu Arg Leu Ser Gly Ile Leu Asp Ala Glu Arg Leu Ser Gly
            245   250   255

Ile Leu Asp Thr Glu Arg Leu Ser Leu Val Leu His Thr Glu Arg Leu
        260   265   270

Ser Gly Ile Leu Val Gly Glu Arg Leu Ser Gly Val Leu His Thr Glu
        275   280   285

Arg Leu Ser Gly Ile Leu Val Gly Glu Arg Leu Ser Gly Ile Leu Asp
        290   295   300

Thr Glu Arg Leu Ser Gly Ile Leu Asp Thr Glu Pro Leu Ser Glu Ser
305   310   315   320

Gln Ile His Ser Ala
            325

<210> 4936
<211> 378
<212> PRT
<213> Homo sapiens

<400> 4936
Met Met Leu Ser Arg Lys Leu Pro Val His Val Asp Asp Pro Leu Ser
1   5   10   15

Thr Thr Leu Phe Ser Ser Gln Leu Asn Arg Arg Ile Ser Asn Met Asp
            20   25   30

Asp Lys Val Tyr Lys Met Ser Arg Ala Leu Ala Glu Ile Lys Lys Arg
        35   40   45

Phe Gln Lys Thr Val Thr Gln Phe Ile Asn Ser Ile Leu Leu Ala Ala
        50   55   60

Gly Leu Phe Thr Ile Glu Tyr Pro Thr Lys Lys Glu Glu Glu Glu Phe
65   70   75   80

Val Arg Phe Lys Met Arg Ser Arg Thr His Pro Glu Arg Leu Pro Lys
                85   90   95

Leu Ser Leu Tyr Ser Gly Glu Ser Leu Leu Arg Ser Gln Ser Gly His
                100   105   110

Leu Glu Ser Ser Ile Ala Glu Thr Leu Lys Asp Glu Pro Glu Ser Ala
                115   120   125

Pro Val Ser Pro Val Arg Lys Thr Thr Lys Ile His Thr Lys Ala Lys
        130   135   140

Val Thr Ser Arg Gly Lys Ala Arg Glu Gly Arg Ser Pro Thr Arg Trp
145   150   155   160

Ala Ala Leu Pro Ser Asp Cys Pro Leu Val Leu Arg Lys Leu Met Leu
                165   170   175

Lys Glu Asp Thr Arg Ala Gly Cys Lys Cys Leu Val Lys Ala Pro Leu
                180   185   190

Val Ser Asp Val Glu Leu Glu Arg Phe Leu Leu Ala Pro Arg Asp Pro
                195   200   205

Ser Gln Val Leu Val Phe Gly Ile Ile Ser Ser Gln Asn Tyr Thr Ser
        210   215   220

Thr Gly Gln Leu Gln Trp Leu Leu Asn Thr Leu Tyr Asn His Gln Gln
225   230   235   240

Arg Gly Arg Gly Ser Pro Cys Ile Gln Cys Arg Tyr Asp Ser Tyr Arg
                245   250   255

Leu Leu Gln Tyr Asp Leu Asp Ser Pro Leu Gln Glu Asp Pro Pro Leu
                260   265   270

Met Val Lys Lys Asn Ser Val Val Gln Gly Met Ile Leu Met Phe Ala
                275   280   285

Gly Gly Lys Leu Ile Phe Gly Gly Arg Val Leu Asn Gly Tyr Gly Leu
                290   295   300

Ser Lys Gln Asn Leu Leu Lys Gln Ile Phe Arg Ser Gln Gln Asp Tyr
305   310   315   320

Lys Met Gly Tyr Phe Leu Pro Asp Asp Tyr Lys Phe Ser Val Pro Asn
                325   330   335

Ser Val Leu Ser Leu Glu Asp Ser Glu Ser Val Lys Lys Ala Glu Ser
                340   345   350

Glu Asp Ile Gln Gly Ser Ser Ser Ser Leu Ala Leu Glu Asp Tyr Val
                355   360   365

Glu Lys Glu Leu Ser Leu Glu Ala Glu Lys
370   375

<210> 4937

<211> 455

<212> PRT

<213> Homo sapiens

<400> 4937

Met Gly Val Ile Ile Ser Gly Ser Leu Pro Pro Phe Ser Ser Pro Leu
 1   5   10   15

Gln Val Gly Pro Val Ser Leu Leu Ala Ile Gly Val Leu Thr Val His
            20   25   30

Cys Met Val Ile Leu Leu Asn Cys Ala Gln His Leu Ser Gln Arg Leu
        35   40   45

Gln Lys Thr Phe Val Asn Tyr Gly Glu Ala Thr Met Tyr Gly Leu Glu
    50   55   60

Thr Cys Pro Asn Thr Trp Leu Arg Ala His Ala Val Trp Gly Arg Trp
65   70   75   80

Asn Leu Ala Leu Ser Pro Arg Leu Glu Cys Ser Gly Lys Ile Ser Ala
                85   90   95

His Cys Asn Pro His Leu Gln Gly Ser Ser Asn Ser Pro Ala Gln Ala
                100   105   110

Ser Arg Val Ala Gly Ile Tyr Arg Tyr Thr Val Ser Phe Leu Leu Val
        115   120   125

Ile Thr Gln Leu Gly Phe Cys Ser Val Tyr Phe Met Phe Met Ala Asp
    130   135   140

Asn Leu Gln Gln Met Val Glu Lys Ala His Val Thr Ser Asn Ile Cys
145   150   155   160

Gln Pro Arg Glu Ile Leu Thr Leu Thr Pro Ile Leu Asp Ile Arg Phe
                165   170   175

Tyr Met Leu Ile Ile Leu Pro Phe Leu Ile Leu Leu Val Phe Ile Gln
                180   185   190

Asn Leu Lys Val Leu Ser Val Phe Ser Thr Leu Ala Asn Ile Thr Thr
                195   200   205

```
Leu Gly Ser Met Ala Leu Ile Phe Glu Tyr Ile Met Glu Gly Ile Pro
        210                 215                 220
Tyr Pro Ser Asn Leu Pro Leu Met Ala Asn Trp Lys Thr Phe Leu Leu
225                 230                 235                 240
Phe Phe Gly Thr Ala Ile Phe Thr Phe Glu Gly Val Gly Met Val Leu
                245                 250                 255
Pro Leu Lys Asn Gln Met Lys His Pro Gln Gln Phe Ser Phe Val Leu
                260                 265                 270
Tyr Leu Gly Met Ser Ile Val Ile Ile Leu Tyr Ile Leu Leu Gly Thr
                275                 280                 285
Leu Gly Tyr Met Lys Phe Gly Ser Asp Thr Gln Ala Ser Ile Thr Leu
        290                 295                 300
Asn Leu Pro Asn Cys Trp Leu Tyr Gln Ser Val Lys Leu Met Tyr Ser
305                 310                 315                 320
Ile Gly Ile Phe Phe Thr Tyr Ala Leu Gln Phe His Val Pro Ala Glu
                325                 330                 335
Ile Ile Ile Pro Phe Ala Ile Ser Gln Val Ser Glu Ser Trp Ala Leu
                340                 345                 350
Phe Val Asp Leu Ser Val Arg Ser Ala Leu Val Cys Leu Thr Cys Val
                355                 360                 365
Ser Ala Ile Leu Ile Pro Arg Leu Asp Leu Val Ile Ser Leu Val Gly
        370                 375                 380
Ser Val Ser Ser Ser Ala Leu Ala Leu Ile Ile Pro Ala Leu Leu Glu
385                 390                 395                 400
Ile Val Ile Phe Tyr Ser Glu Asp Met Ser Cys Val Thr Ile Ala Lys
                405                 410                 415
Asp Ile Met Ile Ser Ile Val Gly Leu Leu Gly Cys Ile Phe Gly Thr
                420                 425                 430
Tyr Gln Ala Leu Tyr Glu Leu Pro Gln Pro Ile Ser His Ser Met Ala
        435                 440                 445
Asn Ser Thr Gly Val His Ala
        450                 455
```

<210> 4938

<211> 162

<210> PRT
<213> Homo sapiens

<400> 4938

```
Met Ser Ile Thr Arg Leu His Glu Gln Lys Leu Val Gln His Val Val
 1               5                  10                  15
Ser Gln Asn Cys Asp Gly Leu His Leu Arg Ser Gly Leu Pro Arg Thr
                20                  25                  30
Ala Ile Ser Glu Leu His Gly Asn Met Tyr Ile Glu Val Ser Ser Pro
                35                  40                  45
Ala Gly Thr Gln Gly Leu His Gly Gln Ala Gly Pro Thr His Cys Ala
            50                  55                  60
Leu Leu Pro Leu Gly Leu Tyr Leu Leu Arg Ser Gln Gln Gly Val Arg
65                  70                  75                  80
Ala Gly Val Arg Cys Asp Gly Ala His Cys Pro Pro Gln Thr Pro Asp
                85                  90                  95
Arg Pro Asp Leu Pro Gln Val Trp Asp Pro Ala Ala Gly His His Cys
                100                 105                 110
Ala Leu Trp Gly Glu Gly Asp Val Gly Ala Ala Ser Glu Leu Gly Ser
            115                 120                 125
Gly Asp Arg Gly Cys Gln Gln Ser Arg His His Pro Val Ser Arg Val
            130                 135                 140
Gln Pro Glu Gly Ser Lys Glu Val Pro Thr Pro Leu Val His Asp Gln
145                 150                 155                 160
Ala Pro
```

<210> 4939
<211> 567
<212> PRT
<213> Homo sapiens

<400> 4939

```
Met Asp Asp Lys Asp Ile Asp Lys Glu Leu Arg Gln Lys Leu Asn Phe
 1               5                  10                  15
```

Ser Tyr Cys Glu Glu Thr Glu Ile Glu Gly Gln Lys Lys Val Glu Glu
                20   25   30

Ser Arg Glu Ala Ser Ser Gln Thr Pro Glu Lys Gly Glu Val Gln Asp
              35   40   45

Ser Glu Ala Lys Gly Thr Pro Pro Trp Thr Pro Leu Ser Asn Val His
          50   55   60

Glu Leu Asp Thr Ser Ser Glu Lys Asp Lys Glu Ser Pro Asp Gln Ile
65   70   75   80

Leu Arg Thr Pro Val Ser His Pro Leu Lys Cys Pro Glu Thr Pro Ala
                  85   90   95

Gln Pro Asp Ser Arg Ser Lys Leu Leu Pro Ser Asp Ser Pro Ser Thr
                100   105   110

Pro Lys Thr Met Leu Ser Arg Leu Val Ile Ser Pro Thr Gly Lys Leu
              115   120   125

Pro Ser Arg Gly Pro Lys His Leu Lys Leu Thr Pro Ala Pro Leu Lys
          130   135   140

Asp Glu Met Thr Ser Leu Ala Leu Val Asn Ile Asn Pro Phe Thr Pro
145   150   155   160

Glu Ser Tyr Lys Lys Leu Phe Leu Gln Ser Gly Gly Lys Arg Lys Ile
              165   170   175

Arg Gly Asp Leu Glu Glu Ala Gly Pro Glu Glu Gly Lys Gly Gly Leu
              180   185   190

Pro Ala Lys Arg Cys Val Leu Arg Glu Thr Asn Met Ala Ser Arg Tyr
              195   200   205

Glu Lys Glu Phe Leu Glu Val Glu Lys Ile Gly Val Gly Glu Phe Gly
      210   215   220

Thr Val Tyr Lys Cys Ile Lys Arg Leu Asp Gly Cys Val Tyr Ala Ile
225   230   235   240

Lys Arg Ser Met Lys Thr Phe Thr Glu Leu Ser Asn Glu Asn Ser Ala
                  245   250   255

Leu His Glu Val Tyr Ala His Ala Val Leu Gly His His Pro His Val
              260   265   270

Val Arg Tyr Tyr Ser Ser Trp Ala Glu Asp Asp His Met Ile Ile Gln
          275   280   285

Asn Glu Tyr Cys Asn Gly Gly Ser Leu Gln Ala Ala Ile Ser Glu Asn
      290   295   300

Thr Lys Ser Gly Asn His Phe Glu Glu Pro Lys Leu Lys Asp Ile Leu
305   310   315   320

Leu Gln Ile Ser Leu Gly Leu Asn Tyr Ile His Asn Ser Ser Met Val
                325   330   335

His Leu Asp Ile Lys Pro Ser Asn Ile Phe Ile Cys His Lys Val Gln
                340   345   350

Ser Glu Ser Ser Gly Val Ile Glu Glu Val Glu Asn Glu Ala Asp Trp
            355   360   365

Phe Leu Ser Ala Asn Val Met Tyr Lys Ile Gly Asp Leu Gly His Ala
        370   375   380

Thr Ser Ile Asn Lys Pro Lys Val Glu Glu Gly Asp Ser Arg Phe Leu
385   390   395   400

Ala Asn Glu Ile Leu Gln Glu Asp Tyr Arg His Leu Pro Lys Ala Asp
                405   410   415

Ile Phe Ala Leu Gly Leu Thr Ile Ala Val Ala Ala Gly Ala Glu Ser
                420   425   430

Leu Pro Thr Asn Gly Ala Ala Trp His His Ile Arg Lys Gly Asn Phe
                435   440   445

Pro Asp Val Pro Gln Glu Leu Ser Glu Ser Phe Ser Ser Leu Leu Lys
        450   455   460

Asn Met Ile Gln Pro Asp Ala Glu Gln Arg Pro Ser Ala Ala Ala Leu
465   470   475   480

Ala Arg Asn Thr Val Leu Arg Pro Ser Leu Gly Lys Thr Glu Glu Leu
                485   490   495

Gln Gln Gln Leu Asn Leu Glu Lys Phe Lys Thr Ala Thr Leu Glu Arg
                500   505   510

Glu Leu Arg Glu Ala Gln Gln Ala Gln Ser Pro Gln Gly Tyr Thr His
            515   520   525

Tyr Gly Asp Thr Gly Val Ser Gly Thr His Thr Gly Ser Arg Ser Thr
        530   535   540

Lys Arg Leu Val Gly Gly Lys Ser Ala Arg Ser Ser Ser Phe Thr Ser
545   550   555   560

Gly Glu Arg Glu Pro Leu His
                565

<210> 4940

<211> 140

<212> PRT

<213> Homo sapiens

<400> 4940

Met Asp Phe Ile Val Ala Ala Ser Asn Leu Arg Ala Glu Asn Tyr Asp

1   5   10   15

Ile Pro Ser Ala Asp Arg His Lys Ser Lys Leu Ile Ala Gly Lys Ile

                20   25   30

Ile Pro Ala Ile Ala Thr Thr Thr Ala Ala Val Val Gly Leu Val Cys

            35   40   45

Leu Glu Leu Tyr Lys Val Val Gln Gly His Arg Gln Leu Asp Ser Tyr

        50   55   60

Lys Asn Gly Phe Leu Asn Leu Ala Leu Pro Phe Phe Gly Phe Ser Glu

65   70   75   80

Pro Leu Ala Ala Pro Arg His Gln Tyr Tyr Asn Gln Glu Trp Thr Leu

                85   90   95

Trp Asp Arg Phe Glu Val Gln Gly Leu Gln Pro Asn Gly Glu Glu Met

            100   105   110

Thr Leu Lys Gln Phe Leu Asp Tyr Phe Lys Val Arg Pro Leu Pro Tyr

            115   120   125

Ser Val Thr Pro Pro Gln Gly Ala Arg Cys Thr Arg

        130   135   140

<210> 4941

<211> 477

<212> PRT

<213> Homo sapiens

<400> 4941

Met Ser Ala Ala Pro Gly Leu Leu His Gln Glu Leu Ser Cys Pro Leu

1   5   10   15

Cys Leu Gln Leu Phe Asp Ala Pro Val Thr Ala Glu Cys Gly His Ser

```
                20                      25                      30
Phe Cys Arg Ala Cys Leu Gly Arg Val Ala Gly Glu Pro Ala Ala Asp
            35                      40                      45
Gly Thr Val Leu Cys Pro Cys Cys Gln Ala Pro Thr Arg Pro Gln Ala
        50                      55          ·          60
Leu Ser Thr Asn Leu Gln Leu Ala Arg Leu Val Glu Gly Leu Ala Gln
65                      70                      75                      80
Val Pro Gln Gly His Cys Glu Glu His Leu Asp Pro Leu Ser Ile Tyr
                85                      90                      95
Cys Glu Gln Asp Arg Ala Leu Val Cys Gly Val Cys Ala Ser Leu Gly
            100                     105                     110
Ser His Arg Gly His Arg Leu Leu Pro Ala Ala Glu Ala His Ala Arg
        115                     120                     125 ·
Leu Lys Thr Gln Leu Pro Gln Gln Lys Leu Gln Leu Gln Glu Ala Cys
        130                     135                     140
Met Arg Lys Glu Lys Ser Val Ala Val Leu Glu His Gln Leu Val Glu
145                     150                     155                     160
Val Glu Glu Thr Val Arg Gln Phe Arg Gly Ala Val Gly Glu Gln Leu
                165                     170                     175
Gly Lys Met Arg Val Phe Leu Ala Ala Leu Glu Gly Ser Leu Asp Cys
            180                     185                     190
Glu Ala Glu Arg Val Arg Gly Glu Ala Gly Val Ala Leu Arg Arg Glu
            195                     200                     205
Leu Gly Ser Leu Asn Ser Tyr Leu Glu Gln Leu Arg Gln Met Glu Lys
        210                     215                     220
Val Leu Glu Glu Val Ala Asp Lys Pro Gln Thr Glu Phe Leu Met Lys
225                     230                     235                     240
Tyr Cys Leu Val Thr Ser Arg Leu Gln Lys Ile Leu Ala Glu Ser Pro
            245                     250                     255
Pro Pro Ala Arg Leu Asp Ile Gln Leu Pro Ile Ile Ser Asp Asp Phe
            260                     265                     270
Lys Phe Gln Val Trp Arg Lys Met Phe Arg Ala Leu Met Pro Ala Leu
        275                     280                     285
Glu Glu Leu Thr Phe Asp Pro Ser Ser Ala His Pro Ser Leu Val Val
        290                     295                     300
Ser Ser Ser Gly Arg Arg Val Glu Cys Ser Glu Gln Lys Ala Pro Pro
```

305   310   315   320
Ala Gly Glu Asp Pro Arg Gln Phe Asp Lys Ala Val Ala Val Val Ala
                         325   330   335
His Gln Gln Leu Ser Glu Gly Glu His Tyr Trp Glu Val Asp Val Gly
                    340   345   350
Asp Lys Pro Arg Trp Ala Leu Gly Val Ile Ala Ala Glu Ala Pro Arg
                    355   360   365
Arg Gly Arg Leu His Ala Val Pro Ser Gln Gly Leu Trp Leu Leu Gly
               370   375   380
Leu Arg Glu Gly Lys Ile Leu Glu Ala His Val Glu Ala Lys Glu Pro
385   390   395   400
Arg Ala Leu Arg Ser Pro Glu Arg Arg Pro Thr Arg Ile Gly Leu Tyr
                    405   410   415
Leu Ser Phe Gly Asp Gly Val Leu Ser Phe Tyr Asp Ala Ser Asp Ala
                    420   425   430
Asp Ala Leu Val Pro Leu Phe Ala Phe His Glu Arg Leu Pro Arg Pro
                    435   440   445
Val Tyr Pro Phe Phe Asp Val Cys Trp His Asp Lys Gly Lys Asn Ala
                    450   455   460
Gln Pro Leu Leu Leu Val Gly Pro Glu Gly Ala Glu Ala
465   470   475

<210> 4942
<211> 505
<212> PRT
<213> Homo sapiens

<400> 4942
Met Ala Val Ala Leu Asp Ser Gln Ile Asp Ala Pro Leu Glu Val Glu
1   5   10   15
Gly Cys Leu Ile Met Lys Val Glu Lys Asp Pro Glu Trp Ala Ser Glu
                    20   25   30
Pro Ile Leu Glu Gly Ser Asp Ser Ser Glu Thr Phe Arg Lys Cys Phe
               35   40   45
Arg Gln Phe Cys Tyr Glu Asp Val Thr Gly Pro His Glu Ala Phe Ser

```
        50                      55                      60
Lys Leu Trp Glu Leu Cys Cys Arg Trp Leu Lys Pro Glu Met Arg Ser
 65                      70                      75                      80
Lys Glu Gln Ile Leu Glu Leu Leu Val Ile Glu Gln Phe Leu Thr Ile
                    85                      90                      95
Leu Pro Glu Lys Ile Gln Ala Trp Ala Gln Lys Gln Cys Pro Gln Ser
                   100                     105                     110
Gly Glu Glu Ala Val Ala Leu Val Val His Leu Glu Lys Glu Thr Gly
         115                     120                     125
Arg Leu Arg Gln Gln Val Ser Ser Pro Val His Arg Glu Lys His Ser
         130                     135                     140
Pro Leu Gly Ala Ala Trp Glu Val Ala Asp Phe Gln Pro Glu Gln Val
145                     150                     155                     160
Glu Thr Gln Pro Arg Ala Val Ser Arg Glu Glu Pro Gly Ser Leu His
                   165                     170                     175
Ser Gly His Gln Glu Gln Leu Asn Arg Lys Arg Glu Arg Arg Pro Leu
                   180                     185                     190
Pro Lys Asn Ala Arg Pro Ser Pro Trp Val Pro Ala Leu Ala Asp Glu
                   195                     200                     205
Trp Asn Thr Leu Asp Gln Glu Val Thr Thr Thr Arg Leu Pro Ala Gly
         210                     215                     220
Ser Gln Glu Pro Val Lys Asp Val His Val Ala Arg Gly Phe Ser Tyr
225                     230                     235                     240
Arg Lys Ser Val His Gln Ile Pro Ala Gln Arg Asp Leu Tyr Arg Asp
                   245                     250                     255
Phe Arg Lys Glu Asn Val Gly Asn Val Val Ser Leu Gly Ser Ala Val
                   260                     265                     270
Ser Thr Ser Asn Lys Ile Thr Arg Leu Glu Gln Arg Lys Glu Pro Trp
                   275                     280                     285
Thr Leu Gly Leu His Ser Ser Asn Lys Arg Ser Ile Leu Arg Ser Asn
         290                     295                     300
Tyr Val Lys Glu Lys Ser Val His Ala Ile Gln Val Pro Ala Arg Ser
305                     310                     315                     320
Ala Gly Lys Thr Trp Arg Glu Gln Gln Gln Trp Gly Leu Glu Asp Glu
                   325                     330                     335
Lys Ile Ala Gly Val His Trp Ser Tyr Glu Glu Thr Lys Thr Phe Leu
```

```
            340                     345                     350
Ala Ile Leu Lys Glu Ser Arg Phe Tyr Glu Thr Leu Gln Ala Cys Pro
        355                 360                 365
Arg Asn Ser Gln Val Tyr Gly Ala Val Ala Glu Trp Leu Arg Glu Cys
    370                 375                 380
Gly Phe Leu Arg Thr Pro Glu Gln Cys Arg Thr Lys Phe Lys Ser Leu
385                 390                 395                 400
Gln Lys Ser Tyr Arg Lys Val Arg Asn Gly His Met Leu Glu Pro Cys
                405                 410                 415
Ala Phe Phe Glu Asp Met Asp Ala Leu Leu Asn Pro Ala Ala Arg Ala
                420                 425                 430
Pro Ser Thr Asp Lys Pro Lys Glu Met Ile Pro Val Pro Arg Leu Lys
        435                 440                 445
Arg Ile Ala Ile Ser Ala Lys Glu His Ile Ser Leu Val Glu Glu Glu
    450                 455                 460
Glu Ala Ala Glu Asp Ser Asp Asp Asp Glu Ile Gly Ile Glu Phe Ile
465                 470                 475                 480
Arg Lys Ser Glu Ile His Gly Ala Pro Val Leu Phe Gln Asn Leu Ser
                485                 490                 495
Gly Lys Asn Cys Ala Leu Phe Leu Trp
        500                 505
```

<210> 4943

<211> 133

<212> PRT

<213> Homo sapiens

<400> 4943

```
Met Pro Pro Leu Ala Arg Ser Pro Arg Ala Ser Ile Val Ala Leu Arg
1                   5                   10                  15
Lys Met Ile Thr Ser Phe Leu Ala Leu Trp Trp His Val Cys Val Cys
                20                  25                  30
Ile Cys Ile Tyr Thr His Ile Tyr Ile Asn Thr Gln Thr His Ile Tyr
        35                  40                  45
Thr Asn Thr Arg Ile His Phe Arg Pro Gln Phe Leu Ala His Asn Ser
```

```
        50                      55                      60
His Ser Pro Cys Tyr Thr Leu Leu Leu Gln His Trp Val Cys Gln Ala
65                      70                      75                      80
Ser Gly Asp Asn His Ser Asn Leu Leu Pro Phe Leu Leu Pro Ala Gln
                        85                      90                      95
Asp Arg Thr Leu Ile Phe Pro Thr Phe Leu Met Val Gly His Lys Thr
                        100                     105                     110
His Ser Arg Asp Gly Pro Thr Pro Tyr Pro Ala Arg Arg Asn Ala Ala
                        115                     120                     125
Val Met Lys Leu Pro
                        130
```

<210> 4944

<211> 502

<212> PRT

<213> Homo sapiens

<400> 4944

```
Met Val Gln Tyr His Gly Ala Glu Ala Ala Gln Arg Phe Ile Leu Thr
 1                       5                      10                      15
Val Met Asn Met Val Tyr Asn Met Phe Gln His Gln Ser Leu Gly Ile
                        20                      25                      30
Lys Ile Asn Ile Gln Val Thr Lys Leu Val Leu Leu Arg Gln Arg Pro
                        35                      40                      45
Ala Lys Leu Ser Ile Gly His His Gly Glu Arg Ser Leu Glu Ser Phe
        50                      55                      60
Cys His Trp Gln Asn Glu Glu Tyr Gly Gly Ala Arg Tyr Leu Gly Asn
65                      70                      75                      80
Asn Gln Val Pro Gly Gly Lys Asp Asp Pro Pro Leu Val Asp Ala Ala
                        85                      90                      95
Val Phe Val Thr Arg Thr Asp Phe Cys Val His Lys Asp Glu Pro Cys
                        100                     105                     110
Asp Thr Val Gly Ile Ala Tyr Leu Gly Gly Val Cys Ser Ala Lys Arg

        115                     120                     125
```

Lys Cys Val Leu Ala Glu Asp Asn Gly Leu Asn Leu Ala Phe Thr Ile
    130   135   140

Ala His Glu Leu Gly His Asn Leu Gly Met Asn His Asp Asp Asp His
145   150   155   160

Ser Ser Cys Ala Gly Arg Ser His Ile Met Ser Gly Glu Trp Val Lys
                165   170   175

Gly Arg Asn Pro Ser Asp Leu Ser Trp Ser Ser Cys Ser Arg Asp Asp
                180   185   190

Leu Glu Asn Phe Leu Lys Ser Lys Val Ser Thr Cys Leu Leu Val Thr
                195   200   205

Asp Pro Arg Ser Gln His Thr Val Arg Leu Pro His Lys Leu Pro Gly
    210   215   220

Met His Tyr Ser Ala Asn Glu Gln Cys Gln Ile Leu Phe Gly Met Asn
225   230   235   240

Ala Thr Phe Cys Arg Asn Met Glu His Leu Met Cys Ala Gly Leu Trp
                245   250   255

Cys Leu Val Glu Gly Asp Thr Ser Cys Lys Thr Lys Leu Asp Pro Pro
                260   265   270

Leu Asp Gly Thr Glu Cys Gly Ala Asp Lys Trp Cys Arg Ala Gly Glu
                275   280   285

Cys Val Ser Lys Thr Pro Ile Pro Glu His Val Asp Gly Asp Trp Ser
    290   295   300

Pro Trp Gly Ala Trp Ser Met Cys Ser Arg Thr Cys Gly Thr Gly Ala
305   310   315   320

Arg Phe Arg Gln Arg Lys Cys Asp Asn Pro Pro Pro Gly Pro Gly Gly
                325   330   335

Thr His Cys Pro Gly Ala Ser Val Glu His Ala Val Cys Glu Asn Leu
                340   345   350

Pro Cys Pro Lys Gly Leu Pro Ser Phe Arg Asp Gln Gln Cys Gln Ala
                355   360   365

His Asp Arg Leu Ser Pro Lys Lys Lys Gly Leu Leu Thr Ala Val Val
    370   375   380

Val Asp Asp Lys Pro Cys Glu Leu Tyr Cys Ser Pro Leu Gly Lys Glu
385   390   395   400

Ser Pro Leu Leu Val Ala Asp Arg Val Leu Asp Gly Thr Pro Cys Gly
                405   410   415

Pro Tyr Glu Thr Asp Leu Cys Val His Gly Lys Cys Gln Lys Ile Gly
            420   425   430

Cys Asp Gly Ile Ile Gly Ser Ala Ala Lys Glu Asp Arg Cys Gly Val
            435   440   445

Cys Ser Gly Asp Gly Lys Thr Cys His Leu Ala Lys Gly Asp Phe Ser
        450   455   460

His Ala Arg Gly Thr Gly Tyr Ile Glu Ala Ala Val Ile Pro Ala Gly
465   470   475   480

Ala Arg Arg Ile Arg Val Val Glu Asp Lys Pro Ala His Ser Phe Leu
                485   490   495

Gly Lys Thr Gln Met Thr
                500

<210> 4945

<211> 356

<212> PRT

<213> Homo sapiens

<400> 4945

Met Val Ile Lys Gln Met Leu Ile Arg Asp Pro Phe Pro Ser Leu Ser
1   5   10   15

Leu Ala Gln Ile Ala Met Asp Arg Met Lys Lys Ile Lys Arg Gln Leu
            20   25   30

Ser Met Thr Leu Arg Gly Gly Arg Gly Ile Asp Lys Thr Asn Gly Ala
        35   40   45

Pro Glu Gln Ile Gly Leu Asp Glu Ser Gly Gly Gly Gly Ser Asp
    50   55   60

Pro Gly Glu Ala Pro Thr Arg Ala Ala Pro Gly Glu Leu Arg Ser Ala
65   70   75   80

Arg Gly Pro Leu Ser Ser Ala Pro Glu Ile Val His Glu Asp Leu Lys
                85   90   95

Met Gly Ser Asp Gly Glu Ser Asp Gln Ala Ser Ala Thr Ser Ser Asp
            100   105   110

Glu Val Gln Ser Pro Val Arg Val Arg Met Arg Asn His Pro Pro Arg
            115   120   125

Lys Ile Ser Thr Glu Asp Ile Asn Lys Arg Leu Ser Leu Pro Ala Asp
        130   135   140

Ile Arg Leu Pro Glu Gly Tyr Leu Glu Lys Leu Thr Leu Asn Ser Pro
145   150   155   160

Ile Phe Asp Lys Pro Leu Ser Arg Arg Leu Arg Arg Val Ser Leu Ser
                165   170   175

Glu Ile Gly Phe Gly Lys Leu Glu Thr Tyr Ile Lys Leu Asp Lys Leu
                180   185   190

Gly Glu Gly Thr Tyr Ala Thr Val Tyr Lys Gly Lys Ser Lys Leu Thr
                195   200   205

Asp Asn Leu Val Ala Leu Lys Glu Ile Arg Leu Glu His Glu Glu Gly
        210   215   220

Ala Pro Cys Thr Ala Ile Arg Glu Val Ser Leu Leu Lys Asp Leu Lys
225   230   235   240

His Ala Asn Ile Val Thr Leu His Asp Ile Ile His Thr Glu Lys Ser
                245   250   255

Leu Thr Leu Val Phe Glu Tyr Leu Asp Lys Asp Leu Lys Gln Tyr Leu
                260   265   270

Asp Asp Cys Gly Asn Ile Ile Asn Met His Asn Val Lys Val Gly Val
                275   280   285

Gly Gln Glu Ala Gly Ala Gln Gly Gly Pro His Ser Pro Thr Pro Thr
        290   295   300

His Lys Ser Pro Arg Asn Gly Leu Phe Pro Leu Ala Phe Phe Ala Arg
305   310   315   320

Ser Pro Trp Arg Ala Leu Gly Pro Cys Pro Leu Leu Cys Asp Lys Ala
                325   330   335

Leu Gly Leu Val Ser Val Phe Gly Arg Gly Ala Val Pro Ala Gly Gly
                340   345   350

Arg Ala Ser Gly
        355

<210> 4946
<211> 126
<212> PRT
<213> Homo sapiens

<400> 4946

Met Met Ile Thr Ala His Tyr Ser Leu Asp Phe Thr Gly Ser Gly Asp
1   5   10   15

Phe Pro Thr Ser Ala Ser Arg Val Ala Gly Thr Thr Gly Thr His His
                20   25   30

His Thr Gln Leu Ile Phe Cys Ile Phe Ser Arg Gly Arg Val Leu Pro
            35   40   45

Cys Cys Pro Gly Trp Ser Arg Thr Pro Gly Leu Lys Gln Ser Ala His
        50   55   60

Leu Gly Leu Pro Lys Cys Trp Ile Thr Gly Met Ser Arg Cys Ala Gln
65   70   75   80

Pro Lys Ile Ile Phe Ile Leu Phe Ile Gly Ser Ser Phe Ile Ala Leu
                85   90   95

Glu Ile Gln Ala Ala Arg Tyr Cys Asp Trp Cys Ile Trp Thr Tyr Leu
                100   105   110

Trp Ser Lys Thr Gly Thr His Gln Ile Val Ala Leu Ala Asn
            115   120   125

<210> 4947
<211> 141
<212> PRT
<213> Homo sapiens

<400> 4947

Met Leu Leu Trp Thr Leu Gln Tyr Lys Cys Leu Thr Lys Ser Leu Leu
1   5   10   15

Leu Ile Leu Trp Gly Ile Tyr Ile Lys Val Glu Leu Leu Asp His Leu
                20   25   30

Val Val Leu His Phe Thr Phe Phe Arg Asp Cys His Ile Val Phe His
            35   40   45

Ser Asp Cys Thr Ile Leu Tyr Ser Leu Arg Gln Tyr Ala Arg Val Leu
        50   55   60

Ile Ser Pro Tyr Ser His Gln His Leu Phe Ser Val Leu Arg Ile Ile
65   70   75   80

Ala Ile Leu Arg Gly Val Met Trp Tyr Leu Ile Glu Val Ser Ile Cys
            85   90   95

Ile Ser Leu Met Ile Ser Asp Val Glu Cys Phe Phe Met Tyr Phe Leu
            100   105   110

Ala Ile Cys Ile Ser Pro Leu Lys Lys Tyr Gln Tyr Gln Val Ile Cys
      115   120   125

Ser Cys Leu Ile Glu Leu Leu Cys Cys Gly Gly Phe Tyr
      130   135   140

<210> 4948

<211> 152

<212> PRT

<213> Homo sapiens

<400> 4948

Met Gly Phe His Tyr Val Gly Gln Ala Gly Leu Glu Leu Leu Thr Ser
  1   5   10   15

Gly Asp Pro Leu Ala Ser Ala Phe Gln Ser Ala Gly Ile Ile Gly Val
            20   25   30

Ser His Arg Thr Trp Gly Gly Tyr Cys Leu Lys Lys Lys Ser Pro Asp
            35   40   45

Ser Asp Pro Leu Ser Thr Trp Arg Thr Ser Thr Gly Arg Lys Gln Met
      50   55   60

Leu Gln Ile Phe Lys Tyr Pro Asp Gly Phe Gly Ser Gln Gly Glu Arg
  65   70   75   80

Asp Leu Thr Ser Val Tyr His Pro Thr Leu Ser Thr Lys Val Thr Ile
            85   90   95

Asn Thr Lys Ser Ile Ala Trp Ala Thr Gly Lys Lys Ala Phe Ile Cys
            100   105   110

Ile Asn Val Cys Val Tyr Ile His Cys Phe Phe Phe Phe Lys Arg Leu
      115   120   125

Gly Leu Pro Leu Ser Pro Arg Leu Glu His Ser Gly Thr Ile Ile Ala
      130   135   140

His Cys Ser Leu Gln Arg Cys Gly
145   150

<210> 4949

<211> 168

<212> PRT

<213> Homo sapiens

<400> 4949

```
Met Tyr Pro Ser Asn Lys Lys Lys Lys Val Trp Arg Glu Glu Lys Glu
 1               5                  10                  15
Arg Leu Leu Lys Met Thr Leu Glu Glu Arg Arg Lys Glu Tyr Leu Arg
                20                  25                  30
Asp Tyr Ile Pro Leu Asn Ser Ile Leu Ser Trp Lys Glu Glu Met Lys
            35                  40                  45
Gly Lys Gly Gln Asn Asp Glu Glu Asn Ile Gln Glu Thr Ser Gln Val
        50                  55                  60
Lys Lys Ser Leu Thr Glu Lys Val Ser Leu Tyr Arg Gly Asp Ile Thr
65                  70                  75                  80
Leu Leu Glu Val Asp Ala Ile Val Asn Ala Ala Asn Ala Ser Leu Leu
                85                  90                  95
Gly Gly Gly Gly Val Asp Gly Cys Ile His Arg Ala Ala Gly Pro Cys
                100                 105                 110
Leu Leu Ala Glu Cys Arg Asn Leu Asn Gly Cys Asp Thr Gly His Ala
            115                 120                 125
Lys Ile Thr Cys Gly Tyr Asp Leu Pro Ala Lys Tyr Val Ile His Thr
        130                 135                 140
Val Gly Pro Ile Ala Arg Ala Ile Leu Met Val Pro Thr Arg Lys Thr
145                 150                 155                 160
Leu Gln Ile Ala Ile Asn His Leu
                165
```


<210> 4950

<211> 151

<212> PRT

<213> Homo sapiens

<400> 4950

Met Gly Leu Gly Gly Val Ser Arg Glu Ala Gly Leu Leu Leu Leu Ser
1   5   10   15

Ser Pro Cys Pro Asp Pro Ser Val Cys Leu Ser Asp Lys Pro Val Pro
            20   25   30

Glu Glu Ser Glu Gly Pro Gly Ser Pro Pro Tyr Lys Met Ile Gln
        35   40   45

Thr Ile Gly Leu Ser Val Gly Ala Ala Val Ala Tyr Ile Ile Ala Val
    50   55   60

Leu Gly Leu Met Phe Tyr Cys Lys Lys Arg Cys Lys Ala Lys Arg Leu
65   70   75   80

Gln Lys Gln Pro Glu Gly Glu Glu Pro Glu Met Glu Cys Leu Asn Gly
                85   90   95

Gly Pro Leu Gln Asn Gly Gln Pro Ser Ala Glu Ile Gln Glu Glu Val
            100   105   110

Ala Leu Thr Ser Leu Gly Ser Gly Pro Ala Ala Thr Asn Lys Arg His
        115   120   125

Ser Thr Ser Asp Lys Met His Phe Pro Arg Ser Ser Leu Gln Pro Ile
    130   135   140

Thr Thr Leu Gly Met Leu Pro
145   150

<210> 4951
<211> 182
<212> PRT
<213> Homo sapiens

<400> 4951

Met Leu Pro Thr Ala Ala Gly Phe Ser Ile Trp Gly Gln Val Gly Ala
1   5   10   15

Ala Arg Glu Ala Pro Arg Cys Gln Thr Lys Ile Ser Ser Cys Ser Cys
            20   25   30

Pro Thr Ser Ser Val Ser Ala Ala His Gly Pro Gly Pro Asn Glu Arg
        35   40   45

Ala Arg Gly Leu Gly Gly Leu Pro Asp Pro Ala Leu Ser Pro Arg Val
        50   55   60

Pro Phe Gln Gly Tyr Ala Arg Ile Val Phe Ala Ile Ile Ser Phe Tyr
65   70   75   80

Phe Met Pro Cys Cys Pro Leu Thr Ala Ser Ser Phe Tyr Leu Leu Ser
                85   90   95

Gly Leu Leu Asp Ala Phe Asp Gly His Ala Ala Arg Ala Leu Asn Gln
                100   105   110

Gly Thr Arg Phe Gly Ala Met Leu Asp Met Leu Thr Asp Arg Cys Ser
            115   120   125

Thr Met Cys Leu Leu Val Asn Leu Ala Leu Leu Tyr Pro Gly Ala Thr
        130   135   140

Leu Phe Phe Gln Ile Ser Met Ser Leu Asp Val Ala Ser His Trp Leu
145   150   155   160

His Leu His Arg Ser Ala Ala Ile Leu Gly Ala Trp Ala Thr Trp Arg
                165   170   175

His Tyr Ser Gly Val Gly
                180

<210> 4952

<211> 258

<212> PRT

<213> Homo sapiens

<400> 4952

Met Gly Thr Leu Thr Phe His Leu Lys Ser Ser Phe Pro Gln Val Leu
1   5   10   15

Arg His Val Asn Gly Gln Asp Gln Ile Val Pro Gly Leu Tyr Ala Cys
                20   25   30

Gly Glu Ala Ala Cys Ala Ser Val His Gly Ala Asn Arg Leu Gly Ala
            35   40   45

Asn Ser Leu Leu Asp Leu Val Ala Phe Gly Arg Ala Cys Ala Pro Ser
        50   55   60

Ile Glu Glu Ser Cys Arg Pro Gly Asp Lys Val Pro Pro Ile Lys Pro
65   70   75   80

Asn Ala Gly Glu Glu Ser Val Met Asn Leu Asp Lys Leu Arg Phe Ala
                85   90   95
Asp Gly Ser Ile Arg Thr Ser Glu Leu Arg Leu Ser Met Gln Lys Ser
                100   105   110
Met Gln Asn His Ala Ala Val Phe Arg Val Gly Ser Val Leu Gln Glu
                115   120   125
Gly Cys Gly Lys Ile Ser Lys Leu Tyr Gly Asp Leu Lys His Leu Lys
            130   135   140
Thr Phe Asp Arg Gly Met Val Trp Asn Thr Asp Leu Val Glu Thr Leu
145   150   155   160
Glu Leu Gln Asn Leu Met Leu Cys Ala Leu Gln Thr Ile Tyr Gly Ala
                165   170   175
Glu Ala Arg Lys Glu Ser Arg Gly Ala His Ala Arg Glu Asp Tyr Lys
                180   185   190
Val Arg Ile Asp Glu Tyr Asp Tyr Ser Lys Pro Ile Gln Gly Gln Gln
                195   200   205
Lys Lys Pro Phe Glu Glu His Trp Arg Lys His Thr Leu Ser Tyr Val
            210   215   220
Asp Val Gly Thr Gly Lys Val Thr Leu Glu Tyr Arg Pro Val Ile Asp
225   230   235   240
Lys Thr Leu Asn Glu Ala Asp Cys Ala Thr Val Pro Pro Ala Ile Arg
                245   250   255
Ser Tyr

<210> 4953
<211> 149
<212> PRT
<213> Homo sapiens

<400> 4953
Met Tyr Met Glu Pro Ser Ala Arg Ser Ala Gly Tyr Ser Pro Gln Gln
1   5   10   15
Lys Arg Leu Ser Lys Thr Arg Ile Pro Arg Leu Gln Ser Leu Thr Asp
                20   25   30

Gln Ala Ala Leu Trp Gly Thr Thr Cys Asp Gln Val Asn Ala Lys Gln
       35   40   45

Gly Pro Lys Pro Ser Pro Gly His Arg Leu Arg Arg Asn Leu Pro Gly
       50   55   60

Glu Lys Trp Glu Ile Asp Phe Thr Lys Val Lys Pro His Gln Ala Gly
65   70   75   80

Tyr Lys Tyr Leu Leu Val Leu Val Asp Thr Phe Ser Gly Trp Thr Glu
             85   90   95

Ala Phe Ala Thr Lys Asn Glu Thr Ala Asn Leu Val Val Lys Phe Leu
          100   105   110

Leu Asn Glu Ile Ile Pro Arg Tyr Gly Leu Pro Ala Ala Ile Gly Ser
          115   120   125

Asp Asn Gly Pro Ala Phe Thr Ser Ser Ile Val Leu Ser Val Ser Lys
          130   135   140

Ala Leu Asn Ile Gln
145

<210> 4954

<211> 602

<212> PRT

<213> Homo sapiens

<400> 4954

Met Glu Ser Gln Ala Thr Ser Ala Ser Ile Asn Asn Ser Asn Pro Ser
1   5   10   15

Thr Ser Glu Gln Ala Ser Asp Thr Ala Ser Ala Val Thr Ser Ser Gln
       20   25   30

Pro Ser Thr Val Ser Glu Thr Ser Ala Thr Leu Thr Ser Asn Ser Thr
       35   40   45

Thr Gly Thr Ser Ile Gly Asp Asp Ser Arg Arg Thr Thr Ser Ser Ala
       50   55   60

Val Thr Glu Thr Gly Pro Pro Ala Met Pro Arg Leu Pro Ser Cys Cys
65   70   75   80

Pro Gln His Ser Pro Cys Gly Gly Ser Ser Gln Asn His His Ala Leu
          85   90   95

Gly His Pro His Thr Ser Cys Phe Gln Gln His Gly His His Phe Gln
    100   105   110

His His His His His His His Thr Pro His Pro Ala Val Pro Val Ser
    115   120   125

Pro Ser Phe Ser Asp Pro Ala Cys Pro Val Glu Arg Pro Pro Gln Val
    130   135   140

Gln Ala Pro Cys Gly Ala Asn Ser Ser Ser Gly Thr Ser Tyr His Glu
145   150   155   160

Gln Gln Ala Leu Pro Val Asp Leu Ser Asn Ser Gly Ile Arg Ser His
      165   170   175

Gly Ser Gly Ser Phe His Gly Ala Ser Ala Phe Asp Pro Cys Cys Pro
      180   185   190

Val Ser Ser Ser Arg Ala Ala Ile Phe Gly His Gln Ala Ala Ala Ala
      195   200   205

Ala Pro Ser Gln Pro Leu Ser Ser Ile Asp Gly Tyr Gly Ser Ser Met
    210   215   220

Val Ala Gln Pro Gln Pro Gln Pro Pro Pro Gln Pro Ser Leu Ser Ser
225   230   235   240

Cys Arg His Tyr Met Pro Pro Pro Tyr Ala Ser Leu Thr Arg Pro Leu
      245   250   255

His His Gln Ala Ser Ala Cys Pro His Ser His Gly Asn Pro Pro Pro
      260   265   270

Gln Thr Gln Pro Pro Pro Gln Val Asp Tyr Val Ile Pro His Pro Val
      275   280   285

His Ala Phe His Ser Gln Ile Ser Ser His Ala Thr Ser His Pro Val
    290   295   300

Ala Pro Pro Pro Pro Thr His Leu Ala Ser Thr Ala Ala Pro Ile Pro
305   310   315   320

Gln His Leu Pro Pro Thr His Gln Pro Ile Ser His His Ile Pro Ala
      325   330   335

Thr Ala Pro Pro Ala Gln Arg Leu His Pro His Glu Val Met Gln Arg
      340   345   350

Met Glu Val Gln Arg Arg Arg Met Met Gln His Pro Thr Gly Leu Phe
      355   360   365

Val Phe Cys Val Ser Arg Arg Ala His Glu Arg Pro Pro Pro His Pro
    370   375   380

His Arg Met His Pro Asn Tyr Gly His Gly His His Ile His Val Pro
385   390   395   400

Gln Thr Met Ser Ser His Pro Arg Gln Ala Pro Glu Arg Ser Ala Trp
                405   410   415

Glu Leu Gly Ile Glu Ala Gly Val Thr Ala Ala Thr Tyr Thr Pro Gly
                420   425   430

Ala Leu His Pro His Leu Ala His Tyr His Ala Pro Pro Arg Leu His
                435   440   445

His Leu Gln Leu Gly Ala Leu Pro Leu Met Val Pro Asp Met Ala Gly
        450   455   460

Tyr Pro His Ile Arg Tyr Ile Ser Ser Gly Leu Asp Gly Thr Ser Phe
465   470   475   480

Arg Gly Pro Phe Arg Gly Asn Phe Glu Glu Leu Ile His Leu Glu Glu
                485   490   495

Arg Leu Gly Asn Val Asn Arg Gly Ala Ser Gln Gly Thr Ile Glu Arg
                500   505   510

Cys Thr Tyr Pro His Lys Tyr Lys Lys Val Thr Thr Asp Trp Phe Ser
        515   520   525

Gln Arg Lys Leu His Cys Lys Gln Asp Gly Glu Glu Gly Thr Glu Glu
        530   535   540

Asp Thr Glu Glu Lys Cys Thr Ile Cys Leu Ser Ile Leu Glu Glu Gly
545   550   555   560

Glu Asp Val Arg Arg Leu Pro Cys Met His Leu Phe His Gln Val Cys
                565   570   575

Val Asp Gln Trp Leu Ile Thr Asn Lys Lys Cys Pro Ile Cys Arg Val
                580   585   590

Asp Ile Glu Ala Gln Leu Pro Ser Glu Ser
                595   600

<210> 4955

<211> 116

<212> PRT

<213> Homo sapiens

<400> 4955

Met Val Ser Gly Met Gly Met Gly Asn Arg Asp Thr Asn Pro Asn Gly
1   5   10   15

Lys Pro Leu Ala Lys Gln Pro Pro Glu Phe Val Leu Ile Val Tyr Ser
            20   25   30

Gln Ser Leu Ala Thr Ala His Thr Leu Phe Phe Ser Tyr Lys Gln Lys
        35   40   45

Glu Leu Ser Leu Ser Ala Met Asn Pro Ala Ile Pro Arg Lys Lys Ala
      50   55   60

Asn Ala Leu Ala Ser Ser Pro Val Arg Ala Thr His Ser Ile Ser Thr
65   70   75   80

Phe Cys Met Leu Lys Leu Cys His Arg Arg Arg Ala Ser Ala His Asp
                85   90   95

Gln Phe Phe Phe Trp Ser Ile Gly Ser Phe Cys Leu Arg Ile Phe Val
            100   105   110

Cys Val Tyr Leu
        115

<210> 4956

<211> 376

<212> PRT

<213> Homo sapiens

<400> 4956

Met Ala Asp Ser Arg Arg Val Ile Ile Ala Ser Trp Tyr Arg Thr Phe
1   5   10   15

Met Gly Ile Val Asn Leu Phe Gly Leu Glu Thr Lys Thr Cys Trp Asn
            20   25   30

Val Thr Arg Ile Glu Pro Leu Asn Glu Val Gln Ser Cys Glu Gly Leu
        35   40   45

Arg Asp Pro Ala Cys Phe Tyr Val Gly Val Ile Phe Ile Leu Asn Gly
      50   55   60

Leu Met Met Gly Leu Phe Phe Ile Tyr Gly Thr Tyr Leu Ser Gly Thr
65   70   75   80

Glu Leu Gly Gly Leu Ile Thr Val Leu Cys Phe Phe Phe Asn His Gly
                85   90   95

Glu Ala Thr Cys Val Met Trp Thr Pro Pro Leu Arg Glu Ser Phe Ser
              100   105   110

Tyr Pro Phe Leu Val Leu Gln Met Tyr Val Leu Thr Leu Ile Leu Arg
              115   120   125

Thr Ser Ser Asn Asp Arg Arg Pro Phe Ile Ala Leu Cys Leu Ser Asn
              130   135   140

Val Ala Phe Met Leu Pro Trp Gln Phe Ala Gln Phe Ile Leu Phe Thr
145   150   155   160

Gln Ile Ala Ser Leu Phe Pro Met Tyr Val Val Gly Tyr Ile Glu Pro
                  165   170   175

Ser Lys Phe Gln Lys Ile Ile Tyr Met Asn Met Ile Ser Val Thr Leu
              180   185   190

Ser Phe Ile Leu Met Phe Gly Asn Ser Met Tyr Leu Ser Ser Tyr Tyr
              195   200   205

Ser Ser Ser Leu Leu Met Thr Trp Ala Ile Ile Leu Lys Arg Asn Glu
      210   215   220

Ile Gln Lys Leu Gly Val Ser Lys Leu Asn Cys Trp Leu Ile Gln Gly
225   230   235   240

Ser Ala Trp Trp Cys Gly Thr Ile Ile Leu Lys Phe Leu Thr Ser Lys
                  245   250   255

Ile Leu Gly Val Ser Asp His Ile Cys Leu Ser Asp Leu Ile Ala Ala
                  260   265   270

Gly Thr Leu Arg Tyr Thr Asp Phe Asp Thr Leu Lys Tyr Thr Cys Ser
                  275   280   285

Pro Glu Phe Asp Phe Met Glu Lys Ala Thr Leu Leu Ile Tyr Thr Lys
      290   295   300

Thr Leu Leu Leu Pro Val Val Met Val Ile Thr Cys Phe Ile Phe Lys
305   310   315   320

Lys Thr Val Gly Asp Ile Ser Arg Val Leu Ala Thr Asn Val Tyr Leu
                  325   330   335

Arg Cys Cys Leu Cys Arg Cys His Ala Tyr Asn Gly Lys Cys Gln Ala
                  340   345   350

Val Tyr Thr Ser Ser His Cys Glu Ser Ser Thr Leu Arg Arg Cys Arg
                  355   360   365

Leu Glu Ala Trp Leu Gln His Ala
      370   375

<210> 4957
<211> 109
<212> PRT
<213> Homo sapiens

<400> 4957

```
Met Tyr Pro Ala Leu Leu Val Pro Ser Ser Ser Pro Ser Ser Val Phe
 1               5                  10                  15
Gly Val Pro Glu Thr Gly Phe Ser Gln Trp Pro Gly Pro Gln Gly Asn
                20                  25                  30
Cys Arg Val Ile Gln Ser Gly Ser Ala Ser Leu Gln Gly Pro Leu Pro
            35                  40                  45
Gly Arg Ala Ser Trp His Pro Ala Ile Gly Gly Pro Asp Thr Pro Ala
        50                  55                  60
Arg Asp Pro Ala Thr Gln Glu Val Pro Thr Pro Ser Gln Ser Asp Pro
65                  70                  75                  80
Gly Pro Arg Ala Asp Arg Ser Pro Pro Leu Lys Arg Leu Leu Pro Leu
                85                  90                  95
Tyr Pro Thr Pro Arg Asp Ser Phe His Ser Gly Ile Ser
                100                 105
```

<210> 4958
<211> 363
<212> PRT
<213> Homo sapiens

<400> 4958

```
Met Pro Val Arg Thr Leu Phe Pro Glu Ser Trp Leu Trp Arg Lys Phe
 1               5                  10                  15
Thr Leu Pro Lys Ser Lys Ser Gly Ile Ser His Tyr Pro Ile Ser Val
                20                  25                  30
Lys Val Pro Asp Ser Ile Thr Thr Trp Gln Phe Val Val Val Ser Leu
            35                  40                  45
```

Lys Ala Gly Gln Gly Leu Cys Val Ser Asp Pro Phe Glu Leu Thr Val
    50   55   60

Met Lys Ser Phe Phe Val Asp Leu Lys Leu Pro Ser Ser Val Ile Arg
65   70   75   80

Asn Glu Gln Val Gln Ile Gln Ala Met Leu Tyr Asn Phe Arg Asp Arg
                85   90   95

Gln Ala Lys Val Arg Val Glu Phe Pro His Lys Glu Thr Leu Cys Ser
          100   105   110

Ala Ser Lys Pro Gly Ala Pro Ser His Gln Ala Gly Val Gln Ile Gln
          115   120   125

Gln Thr Ser Tyr Ser Ile Val Leu Glu Pro Gln Gly Gln Thr Gln Thr
          130   135   140

Lys Leu Val Pro Arg Gln Glu Phe Leu Asn Met Val Pro Asp Thr Glu
145   150   155   160

Ala Glu Val Phe Ile Ser Val Gln Gly Tyr Thr Gln Met Leu Thr His
                165   170   175

Arg Ser Ser Asp Gly Thr Tyr His Thr Ser Lys Gly Asn Pro Gly Ser
          180   185   190

Thr Trp Leu Thr Ser Tyr Val Phe Arg Val Phe Ala Leu Ala Tyr Ser
          195   200   205

Met Met Thr Thr Gln Val Leu Ser Leu Ser Ser Leu Cys Asp Met Ala
          210   215   220

Asn Trp Ile Ile Ile Asp Arg Gln Ala Glu Asp Gly His Phe Leu Glu
225   230   235   240

Lys Gly Pro Val Val Met Thr Ser Met Gln Asp Gly Tyr Gln Gly Ser
                245   250   255

Glu Glu Asp Val Ser Leu Thr Ala Leu Val Leu Ile Ala Leu Asn Glu
          260   265   270

Gly Lys Glu Leu Cys Arg Gln Lys Asn Leu Met Ala Ser Ile Glu Arg
          275   280   285

Ala Arg Gly Phe Leu Glu Arg Lys Leu Pro Asp Ile Gln Thr Thr Phe
          290   295   300

Ala Val Ala Ile Ala Ser Tyr Ala Leu Ala Leu Ala Asn Ser Ser Gln
305   310   315   320

Ala Asn Asp Cys Leu Asp Ser Phe Ala Ser Pro Ser Gly Cys Gly Met
          325   330   335

Leu Leu Asn Gln Pro Gln Ser Trp Ser Gly Glu Gly Val Ile Ser Asn
            340   345   350
Pro Ala Met Cys Tyr Ser Ser Leu Ser Val Ser
            355   360

<210> 4959

<211> 359

<212> PRT

<213> Homo sapiens

<400> 4959

Met Pro Pro Thr Ser Ser Thr Pro Ser Leu Ser Arg Pro Gly Leu Gly
 1   5   10   15
Gln Ala Gly Lys Pro Asp Thr Gly Ser His Pro Pro Pro Thr Ile Ser
                20   25   30
Thr Ser Ile Phe Leu Ser Cys Phe Pro Thr Ile Pro Leu Ser Arg Pro
            35   40   45
Arg Thr Thr Gly Pro Ser His Ser Tyr Gln Ser Ile Ser His Pro Arg
        50   55   60
Ser Cys Arg Asp Val Pro Asp Asp Ile Gln Pro Ile Thr Ser Leu Pro
65   70   75   80
Gly Val Ala Arg Tyr Gly Val Lys Arg Leu Glu Glu Met Leu Arg Pro
                85   90   95
Leu Val Glu Glu Gly Leu Arg Cys Val Leu Ile Phe Gly Val Pro Ser
                100   105   110
Arg Val Pro Lys Asp Glu Arg Gly Ser Ala Ala Asp Ser Glu Glu Ser
            115   120   125
Pro Ala Ile Glu Ala Ile His Leu Leu Arg Lys Thr Phe Pro Asn Leu
            130   135   140
Leu Val Ala Cys Asp Val Cys Leu Cys Pro Tyr Thr Ser His Gly His
145   150   155   160
Cys Gly Leu Leu Ser Glu Asn Gly Ala Phe Arg Ala Glu Glu Ser Arg
                165   170   175
Gln Arg Leu Ala Glu Val Ala Leu Ala Tyr Ala Lys Ala Gly Cys Gln
            180   185   190

```
Val Val Ala Pro Ser Asp Met Met Asp Gly Arg Val Glu Ala Ile Lys
        195                 200                 205
Glu Ala Leu Met Ala His Gly Leu Gly Asn Arg Val Ser Val Met Ser
        210                 215                 220
Tyr Ser Ala Lys Phe Ala Ser Cys Phe Tyr Gly Pro Phe Arg Asp Ala
225                 230                 235                 240
Ala Lys Ser Ser Pro Ala Phe Gly Asp Arg Arg Cys Tyr Gln Leu Pro
                245                 250                 255
Pro Gly Ala Arg Gly Leu Ala Leu Arg Ala Val Asp Arg Asp Val Arg
                260                 265                 270
Glu Gly Ala Asp Met Leu Met Val Lys Pro Gly Met Leu Tyr Leu Asp
                275                 280                 285
Ile Val Arg Glu Val Lys Asp Lys His Pro Asp Leu Pro Leu Ala Val
        290                 295                 300
Tyr His Val Ser Gly Glu Phe Ala Met Leu Trp His Gly Ala Gln Ala
305                 310                 315                 320
Gly Ala Phe Asp Leu Lys Ala Ala Val Leu Glu Ala Met Thr Ala Phe
                325                 330                 335
Arg Arg Ala Gly Ala Asp Ile Ile Ile Thr Tyr Tyr Thr Pro Gln Leu
                340                 345                 350
Leu Gln Trp Leu Lys Glu Glu
                355
```

```
<210> 4960
<211> 508
<212> PRT
<213> Homo sapiens

<400> 4960
Met Met Trp Gly Gly Gly Leu Asp Leu Cys Pro Met Pro Gly Gln Leu
 1                 5                 10                 15
Lys Phe Pro Pro Cys Leu Ser Arg Cys Leu Leu Trp Glu Pro Pro Ser
                20                 25                 30
Leu Tyr Leu Thr Gln Pro Thr Ser Ser Leu Ala Glu Pro Gln Ala Leu
        35                 40                 45
```

Ile Cys Met Thr Ser Ser Ser Ser Gly Leu Phe Ile Gln Asp Asp Asn
          50   55   60

Met Glu Lys Leu Glu Glu Ile Ile Glu Lys Tyr Pro Arg Ala Phe Pro
65   70   75   80

Phe Trp Ile Gly Pro Phe Gln Ala Phe Phe Cys Ile Tyr Asp Pro Asp
                    85   90   95

Tyr Ala Lys Thr Leu Leu Ser Arg Thr Asp Pro Lys Ser Gln Tyr Leu
                    100   105   110

Gln Lys Phe Ser Pro Pro Leu Leu Gly Lys Gly Leu Ala Ala Leu Asp
              115   120   125

Gly Pro Lys Trp Phe Gln His Arg Arg Leu Leu Thr Pro Gly Phe His
          130   135   140

Phe Asn Ile Leu Lys Ala Tyr Ile Glu Val Met Ala His Ser Val Lys
145   150   155   160

Met Met Leu Asp Lys Trp Glu Lys Ile Cys Ser Thr Gln Asp Thr Ser
                    165   170   175

Val Glu Val Tyr Glu His Ile Asn Ser Met Ser Leu Asp Ile Val Met
                    180   185   190

Lys Cys Ala Phe Ser Lys Glu Thr Asn Cys Gln Thr Asn Ser Thr His
              195   200   205

Asp Pro Tyr Ala Lys Ala Ile Phe Glu Leu Ser Lys Ile Ile Phe His
      210   215   220

Arg Leu Tyr Ser Leu Leu Tyr His Ser Asp Ile Ile Phe Lys Leu Ser
225   230   235   240

Pro Gln Gly Tyr Arg Phe Gln Lys Leu Ser Arg Val Leu Asn Gln Tyr
                    245   250   255

Thr Asp Thr Ile Ile Gln Glu Arg Lys Lys Ser Leu Gln Ala Gly Val
              260   265   270

Lys Gln Asp Asn Thr Pro Lys Arg Lys Tyr Gln Asp Phe Leu Asp Ile
              275   280   285

Val Leu Ser Ala Lys Asp Glu Ser Gly Ser Ser Phe Ser Asp Ile Asp
      290   295   300

Val His Ser Glu Val Ser Thr Phe Leu Leu Ala Gly His Asp Thr Leu
305   310   315   320

Ala Ala Ser Ile Ser Trp Ile Leu Tyr Cys Leu Ala Leu Asn Pro Glu
                    325   330   335

```
His Gln Glu Arg Cys Arg Glu Glu Val Arg Gly Ile Leu Gly Asp Gly
            340             345             350
Ser Ser Ile Thr Trp Asp Gln Leu Gly Glu Met Ser Tyr Thr Thr Met
            355             360             365
Cys Ile Lys Glu Thr Cys Arg Leu Ile Pro Ala Val Pro Ser Ile Ser
         370             375             380
Arg Asp Leu Ser Lys Pro Leu Thr Phe Pro Asp Gly Cys Thr Leu Pro
385             390             395             400
Ala Gly Ile Thr Val Val Leu Ser Ile Trp Gly Leu His His Asn Pro
                405             410             415
Ala Val Trp Lys Asn Pro Lys Val Phe Asp Pro Leu Arg Phe Ser Gln
            420             425             430
Glu Asn Ser Asp Gln Arg His Pro Tyr Ala Tyr Leu Pro Phe Ser Ala
            435             440             445
Gly Ser Arg Asn Cys Ile Gly Gln Glu Phe Ala Met Ile Glu Leu Lys
            450             455             460
Val Thr Ile Ala Leu Ile Leu Leu His Phe Arg Val Thr Pro Asp Pro
465             470             475             480
Thr Arg Pro Leu Thr Phe Pro Asn His Phe Ile Leu Lys Pro Lys Asn
                485             490             495
Gly Met Tyr Leu His Leu Lys Lys Leu Ser Glu Cys
            500             505
```

<210> 4961
<211> 1264
<212> PRT
<213> Homo sapiens

<400> 4961

```
Met Cys Lys Lys Leu Thr Lys Leu Ala Lys Glu Asn Asp Ser Met Lys
 1               5               10              15
Glu Glu Leu Leu Lys Tyr Arg Ser Leu Tyr Gly Asp Leu Asp Ser Ala
                20              25              30
Leu Ser Ala Glu Glu Leu Ala Asp Ala Pro His Ser Arg Glu Thr Glu
            35              40              45
```

Leu Lys Val His Leu Lys Leu Val Glu Glu Glu Ala Asn Leu Leu Ser
    50   55   60

Arg Arg Ile Val Glu Leu Glu Val Glu Asn Arg Gly Leu Arg Ala Glu
65   70   75   80

Met Asp Asp Met Lys Asp His Gly Gly Gly Cys Gly Gly Pro Glu Ala
              85   90   95

Arg Leu Ala Phe Ser Ala Leu Gly Gly Gly Glu Cys Gly Glu Ser Leu
          100   105   110

Ala Glu Leu Arg Arg His Leu Gln Phe Val Glu Glu Glu Ala Glu Leu
          115   120   125

Leu Arg Arg Ser Ser Ala Glu Leu Glu Asp Gln Asn Lys Leu Leu Leu
          130   135   140

Asn Glu Leu Ala Lys Phe Arg Ser Glu His Glu Leu Asp Val Ala Leu
145   150   155   160

Ser Glu Asp Ser Cys Ser Val Leu Ser Glu Pro Ser Gln Glu Glu Leu
              165   170   175

Ala Ala Ala Lys Leu Gln Ile Gly Glu Leu Ser Gly Lys Val Lys Lys
          180   185   190

Leu Gln Tyr Glu Asn Arg Val Leu Leu Ser Asn Leu Gln Arg Cys Asp
          195   200   205

Leu Ala Ser Cys Gln Ser Thr Arg Pro Met Leu Glu Thr Asp Ala Glu
          210   215   220

Ala Gly Asp Ser Ala Gln Cys Val Pro Ala Pro Leu Gly Glu Thr His
225   230   235   240

Glu Ser His Ala Val Arg Leu Cys Arg Ala Arg Glu Ala Glu Val Leu
              245   250   255

Pro Gly Leu Arg Glu Gln Ala Ala Leu Val Ser Lys Ala Ile Asp Val
          260   265   270

Leu Val Ala Asp Ala Asn Gly Phe Thr Ala Gly Leu Arg Leu Cys Leu
          275   280   285

Asp Asn Glu Cys Ala Asp Phe Arg Leu His Glu Ala Pro Asp Asn Ser
          290   295   300

Glu Gly Pro Arg Asp Thr Lys Leu Ile His Ala Ile Leu Val Arg Leu
305   310   315   320

Ser Val Leu Gln Gln Glu Leu Asn Ala Phe Thr Arg Lys Ala Asp Ala
          325   330   335

```
Val Leu Gly Cys Ser Val Lys Glu Gln Gln Glu Ser Phe Ser Ser Leu
        340               345               350
Pro Pro Leu Gly Ser Gln Gly Leu Ser Lys Glu Ile Leu Leu Ala Lys
        355               360               365
Asp Leu Gly Ser Asp Phe Gln Pro Pro Asp Phe Arg Asp Leu Pro Glu
        370               375               380
Trp Glu Pro Arg Ile Arg Glu Ala Phe Arg Thr Gly Asp Leu Asp Ser
385               390               395               400
Lys Pro Asp Pro Ser Arg Ser Phe Arg Pro Tyr Arg Ala Glu Asp Asn
                405               410               415
Asp Ser Tyr Ala Ser Glu Ile Lys Glu Leu Gln Leu Val Leu Ala Glu
        420               425               430
Ala His Asp Ser Leu Arg Gly Leu Gln Glu Gln Leu Ser Gln Glu Arg
        435               440               445
Gln Leu Arg Lys Glu Glu Ala Asp Asn Phe Asn Gln Lys Met Val Gln
        450               455               460
Leu Lys Glu Asp Gln Gln Arg Ala Leu Leu Arg Arg Glu Phe Glu Leu
465               470               475               480
Gln Ser Leu Ser Leu Gln Arg Arg Leu Glu Gln Lys Phe Trp Ser Gln
                485               490               495
Glu Lys Asn Met Leu Val Gln Glu Ser Gln Gln Phe Lys His Asn Phe
                500               505               510
Leu Leu Leu Phe Met Lys Leu Arg Trp Phe Leu Lys Arg Trp Arg Gln
        515               520               525
Gly Lys Val Leu Pro Ser Glu Gly Asp Asp Phe Leu Glu Val Asn Ser
        530               535               540
Met Lys Val Leu Tyr Leu Leu Met Glu Glu Glu Glu Ile Asn Ala Gln
545               550               555               560
His Ser Asp Asn Lys Ala Cys Thr Gly Asp Ser Trp Thr Gln Asn Thr
                565               570               575
Pro Asn Glu Tyr Ile Lys Thr Leu Ala Asp Met Lys Val Thr Leu Lys
        580               585               590
Glu Leu Cys Trp Leu Leu Arg Asp Glu Arg Arg Gly Leu Thr Glu Leu
        595               600               605
Gln Gln Gln Phe Ala Lys Ala Lys Ala Thr Trp Glu Thr Glu Arg Ala
        610               615               620
```

Glu Leu Lys Gly His Thr Ser Gln Met Glu Leu Lys Thr Gly Lys Gly
625   630   635   640

Ala Gly Glu Arg Ala Gly Pro Asp Trp Lys Ala Ala Leu Gln Arg Glu
                        645   650   655

Arg Glu Glu Gln Gln His Leu Leu Ala Glu Ser Tyr Ser Ala Val Met
                    660   665   670

Glu Leu Thr Arg Gln Leu Gln Ile Ser Glu Arg Asn Trp Ser Gln Glu
            675   680   685

Lys Leu Gln Leu Val Glu Arg Leu Gln Gly Glu Lys Gln Gln Val Glu
        690   695   700

Gln Gln Val Lys Glu Leu Gln Asn Arg Leu Ser Gln Leu Gln Lys Ala
705   710   715   720

Ala Asp Pro Trp Val Leu Lys His Ser Glu Leu Glu Lys Gln Asp Asn
                    725   730   735

Ser Trp Lys Glu Thr Arg Ser Glu Lys Ile His Asp Lys Glu Ala Val
                740   745   750

Ser Glu Val Glu Leu Gly Gly Asn Gly Leu Lys Arg Thr Lys Ser Val
            755   760   765

Ser Ser Met Ser Glu Phe Glu Ser Leu Leu Asp Cys Ser Pro Tyr Leu
        770   775   780

Ala Gly Gly Asp Ala Arg Gly Lys Lys Leu Pro Asn Asn Pro Ala Phe
785   790   795   800

Gly Phe Val Ser Ser Glu Pro Gly Asp Pro Glu Lys Asp Thr Lys Glu
                    805   810   815

Lys Pro Gly Leu Ser Ser Arg Asp Cys Asn His Leu Gly Ala Leu Ala
                820   825   830

Cys Gln Asp Pro Pro Gly Arg Gln Met Gln Arg Ser Tyr Thr Ala Pro
            835   840   845

Asp Lys Thr Gly Ile Arg Val Tyr Tyr Ser Pro Pro Val Ala Arg Arg
        850   855   860

Leu Gly Val Pro Val Val His Asp Lys Glu Gly Lys Ile Ile Ile Glu
865   870   875   880

Pro Gly Phe Leu Phe Thr Thr Ala Lys Pro Lys Glu Ser Ala Glu Ala
                    885   890   895

Asp Gly Leu Ala Glu Ser Ser Tyr Gly Arg Trp Leu Cys Asn Phe Ser
                900   905   910

Arg Gln Arg Leu Asp Gly Gly Ser Ala Gly Ser Pro Ser Ala Ala Gly
   915   920   925

Pro Gly Phe Pro Ala Ala Leu His Asp Phe Glu Met Ser Gly Asn Met
   930   935   940

Ser Asp Asp Met Lys Glu Ile Thr Asn Cys Val Arg Gln Ala Met Arg
945   950   955   960

Ser Gly Ser Leu Glu Arg Lys Val Lys Ser Thr Ser Ser Gln Thr Val
      965   970   975

Gly Leu Ala Ser Val Gly Thr Gln Thr Ile Arg Thr Val Ser Val Gly
     980   985   990

Leu Gln Thr Asp Pro Pro Arg Ser Ser Leu His Gly Lys Ala Trp Ser
     995   1000   1005

Pro Arg Ser Ser Ser Leu Val Ser Val Arg Ser Lys Gln Ile Ser Ser
   1010   1015   1020

Ser Leu Asp Lys Val His Ser Arg Ile Glu Arg Pro Cys Cys Ser Pro
1025   1030   1035   1040

Lys Tyr Gly Ser Pro Lys Leu Gln Arg Arg Ser Val Ser Lys Leu Asp
     1045   1050   1055

Ser Ser Lys Asp Arg Ser Leu Trp Asn Leu His Gln Gly Lys Gln Asn
     1060   1065   1070

Gly Ser Ala Trp Ala Arg Ser Thr Thr Thr Arg Asp Ser Pro Val Leu
   1075   1080   1085

Arg Asn Ile Asn Asp Gly Leu Ser Ser Leu Phe Ser Val Val Glu His
   1090   1095   1100

Ser Gly Ser Thr Glu Ser Val Trp Lys Leu Gly Met Ser Glu Thr Arg
1105   1110   1115   1120

Ala Lys Pro Glu Pro Pro Lys Tyr Gly Ile Val Gln Glu Phe Phe Arg
     1125   1130   1135

Asn Ala Cys Gly Arg Ala Pro Ser Pro Thr Ser Ser Ala Gly Glu Glu
     1140   1145   1150

Gly Thr Lys Lys Pro Glu Pro Leu Ser Pro Ala Ser Tyr His Gln Pro
   1155   1160   1165

Glu Gly Val Ala Arg Ile Leu Asn Lys Lys Ala Ala Lys Leu Gly Ser
   1170   1175   1180

Ser Glu Glu Val Arg Leu Thr Met Leu Pro Gln Val Gly Lys Asp Gly
1185   1190   1195   1200

Val Leu Arg Asp Gly Asp Gly Ala Val Val Leu Pro Asn Glu Asp Ala
         1205   1210   1215

Val Cys Asp Cys Ser Thr Gln Ser Leu Thr Ser Cys Phe Ala Arg Ser
        1220   1225   1230

Ser Arg Ser Ala Ile Arg His Ser Pro Ser Lys Cys Arg Leu His Pro
        1235   1240   1245

Ser Glu Ser Ser Trp Gly Gly Glu Glu Arg Ala Leu Pro Pro Ser Glu
      1250   1255   1260

<210> 4962

<211> 633

<212> PRT

<213> Homo sapiens

<400> 4962

Met Glu Ser Gly Pro Lys Met Leu Ala Pro Val Cys Leu Val Glu Asn
1   5   10   15

Asn Asn Glu Gln Leu Leu Val Asn Gln Gln Ala Ile Gln Ile Leu Glu
        20   25   30

Lys Ile Ser Gln Pro Val Val Val Val Ala Ile Val Gly Leu Tyr Arg
        35   40   45

Thr Gly Lys Ser Tyr Leu Met Asn His Leu Ala Gly Gln Asn His Gly
      50   55   60

Phe Pro Leu Gly Ser Thr Val Gln Ser Glu Thr Lys Gly Ile Trp Met
65   70   75   80

Trp Cys Val Pro His Pro Ser Lys Pro Asn His Thr Leu Val Leu Leu
        85   90   95

Asp Thr Glu Gly Leu Gly Asp Val Glu Lys Gly Asp Pro Lys Asn Asp
        100   105   110

Ser Trp Ile Phe Ala Leu Ala Val Leu Leu Cys Ser Thr Phe Val Tyr
        115   120   125

Asn Ser Met Ser Thr Ile Asn His Gln Ala Leu Glu Gln Leu His Tyr
        130   135   140

Val Thr Glu Leu Thr Glu Leu Ile Lys Ala Lys Ser Ser Pro Arg Pro
145   150   155   160

Asp Gly Val Glu Asp Ser Thr Glu Phe Val Ser Phe Phe Pro Asp Phe
                165   170   175

Leu Trp Thr Val Arg Asp Phe Thr Leu Glu Leu Lys Leu Asn Gly His
                180   185   190

Pro Ile Thr Glu Asp Glu Tyr Leu Glu Asn Ala Leu Lys Leu Ile Gln
                195   200   205

Gly Asn Asn Pro Arg Val Gln Thr Ser Asn Phe Pro Arg Glu Cys Ile
        210   215   220

Arg Arg Phe Phe Pro Lys Arg Lys Cys Phe Val Phe Asp Arg Pro Thr
225   230   235   240

Asn Asp Lys Asp Leu Leu Ala Asn Ile Glu Lys Val Ser Glu Lys Gln
                245   250   255

Leu Asp Pro Lys Phe Gln Glu Gln Thr Asn Ile Phe Cys Ser Tyr Ile
                260   265   270

Phe Thr His Ala Arg Thr Lys Thr Leu Arg Glu Gly Ile Thr Val Thr
                275   280   285

Gly Asn Arg Leu Gly Thr Leu Ala Val Thr Tyr Val Glu Ala Ile Asn
        290   295   300

Ser Gly Ala Val Pro Cys Leu Glu Asn Ala Val Ile Thr Leu Ala Gln
305   310   315   320

Arg Glu Asn Ser Ala Ala Val Gln Arg Ala Ala Asp Tyr Tyr Ser Gln
                325   330   335

Gln Met Ala Gln Arg Val Lys Leu Pro Thr Asp Thr Leu Gln Glu Leu
                340   345   350

Leu Asp Met His Ala Ala Cys Glu Arg Glu Ala Ile Ala Ile Phe Met
                355   360   365

Glu His Ser Phe Lys Asp Glu Asn Gln Glu Phe Gln Lys Lys Phe Met
                370   375   380

Glu Thr Thr Met Asn Lys Lys Gly Asp Phe Leu Leu Gln Asn Glu Glu
385   390   395   400

Ser Ser Val Gln Tyr Cys Gln Ala Lys Leu Asn Glu Leu Ser Lys Gly
                405   410   415

Leu Met Glu Ser Ile Ser Ala Gly Ser Phe Ser Val Pro Gly Gly His
                420   425   430

Lys Leu Tyr Met Glu Thr Lys Glu Arg Ile Glu Gln Asp Tyr Trp Gln
                435   440   445

Val Pro Arg Lys Gly Val Lys Ala Lys Glu Val Phe Gln Arg Phe Leu
   450   455   460

Glu Ser Gln Met Val Ile Glu Glu Ser Ile Leu Gln Ser Asp Lys Ala
465   470   475   480

Leu Thr Asp Arg Glu Lys Ala Val Ala Val Asp Arg Ala Lys Lys Glu
          485   490   495

Ala Ala Glu Lys Glu Gln Glu Leu Leu Lys Gln Lys Leu Gln Glu Gln
          500   505   510

Gln Gln Gln Met Glu Ala Gln Asp Lys Ser Arg Lys Glu Asn Ile Ala
          515   520   525

Gln Leu Lys Glu Lys Leu Gln Met Glu Arg Glu His Leu Leu Arg Glu
          530   535   540

Gln Ile Met Met Leu Glu His Thr Gln Lys Val Gln Asn Asp Trp Leu
545   550   555   560

His Glu Gly Phe Lys Lys Lys Tyr Glu Glu Met Asn Ala Glu Ile Ser
          565   570   575

Gln Phe Lys Arg Met Ile Asp Thr Thr Lys Asn Asp Asp Thr Pro Trp
          580   585   590

Ile Ala Arg Thr Leu Asp Asn Leu Ala Asp Glu Leu Thr Ala Ile Leu
          595   600   605

Ser Ala Pro Ala Lys Leu Ile Gly His Gly Val Lys Gly Val Ser Ser
          610   615   620

Leu Phe Lys Lys His Lys Leu Pro Phe
625   630

<210> 4963

<211> 779

<212> PRT

<213> Homo sapiens

<400> 4963

Met Leu Pro Cys His Ser Pro Ser Arg Ser Asp Gln Val Asn Leu Gly
1   5   10   15

Pro Ser Ile Asn Ser Lys Leu Leu Gly Met Ser Thr Gln Asn Tyr Ala
          20   25   30

Leu Met Gln Val Ala Gly Gln Glu Gly Thr Phe Ser Leu Val Ala Leu
     35   40   45

Pro His Val Ala Ser Ala Gln Pro Ile Gln Lys Pro Arg Met Ser Leu
     50   55   60

Pro Glu Asn Leu Lys Leu Pro Ile Pro Arg Tyr Gln Pro Pro Arg Asn
65   70   75   80

Ser Lys Ala Ser Arg Lys Lys Pro Ile Leu Ile Phe Pro Lys Ser Gly
           85   90   95

Cys Ser Lys Ala Pro Ala Gln Thr Gln Met Cys Pro Gln Met Ser Pro
         100   105   110

Ser Pro Pro His His Pro Glu Leu Leu Tyr Lys Pro Ser Pro Phe Glu
        115   120   125

Glu Val Pro Ser Leu Glu Gln Ala Pro Ala Ser Ile Ser Thr Ala Ala
     130   135   140

Leu Thr Asn Gly Ser Asp His Gly Asp Leu Arg Pro Pro Val Thr Asn
145   150   155   160

Thr His Gly Ser Leu Asn Pro Pro Ala Thr Pro Ala Ser Ser Thr Pro
         165   170   175

Glu Glu Pro Ala Lys Gln Asp Leu Thr Ala Leu Ser Gly Lys Ala His
         180   185   190

Phe Val Ser Lys Ile Thr Ser Ser Lys Pro Ser Ala Val Ala Ser Glu
         195   200   205

Lys Phe Lys Glu Gln Val Asp Leu Ala Lys Thr Met Thr Asn Leu Ser
     210   215   220

Pro Thr Ile Leu Gly Asn Ala Val Gln Leu Ile Ser Ser Val Pro Lys
225   230   235   240

Gly Lys Leu Pro Ile Pro Pro Tyr Ser Arg Met Lys Thr Met Glu Val
         245   250   255

Tyr Lys Ile Lys Ser Asp Ala Asn Ile Ala Gly Phe Ser Leu Pro Gly
         260   265   270

Pro Lys Ala Asp Cys Asp Lys Ile Pro Ser Thr Thr Glu Gly Phe Asn
         275   280   285

Ala Ala Thr Lys Val Ala Ser Arg Leu Pro Val Pro Gln Val Ser Gln
     290   295   300

Gln Ser Ala Cys Glu Ser Ala Phe Cys Pro Pro Thr Lys Leu Asp Leu
305   310   315   320

Asn His Lys Thr Lys Leu Asn Ser Gly Ala Ala Lys Arg Lys Gly Arg
              325   330   335

Lys Arg Lys Val Pro Asp Glu Ile Leu Ala Phe Gln Gly Lys Arg Arg
              340   345   350

Lys Tyr Ile Ile Asn Lys Cys Arg Asp Gly Lys Glu Arg Val Lys Asn
          355   360   365

Asp Pro Gln Glu Phe Arg Asp Gln Lys Leu Gly Thr Leu Lys Lys Tyr
     370   375   380

Arg Ser Ile Met Pro Lys Pro Ile Met Val Ile Pro Thr Leu Ala Ser
385   390   395   400

Leu Ala Ser Pro Thr Thr Leu Gln Ser Gln Met Leu Gly Gly Leu Gly
              405   410   415

Gln Asp Val Leu Leu Asn Asn Ser Leu Thr Pro Lys Tyr Leu Gly Cys
          420   425   430

Lys Gln Asp Asn Ser Ser Ser Pro Lys Pro Ser Ser Val Phe Arg Asn
          435   440   445

Gly Phe Ser Gly Ile Lys Lys Pro Trp His Arg Cys His Val Cys Asn
          450   455   460

His His Phe Gln Phe Lys Gln His Leu Arg Asp His Met Asn Thr His
465   470   475   480

Thr Asn Arg Arg Pro Tyr Ser Cys Arg Ile Cys Arg Lys Ser Tyr Val
              485   490   495

Arg Pro Gly Ser Leu Ser Thr His Met Lys Leu His His Gly Glu Asn
          500   505   510

Arg Leu Lys Lys Leu Met Cys Cys Glu Phe Cys Ala Lys Val Phe Gly
          515   520   525

His Ile Arg Val Tyr Phe Gly His Leu Lys Glu Val His Arg Val Val
          530   535   540

Ile Ser Thr Glu Pro Ala Pro Ser Glu Leu Gln Pro Gly Asp Ile Pro
545   550   555   560

Lys Asn Arg Asp Met Ser Val Arg Gly Met Glu Gly Ser Leu Glu Arg
          565   570   575

Glu Asn Lys Ser Asn Leu Glu Glu Asp Phe Leu Leu Asn Gln Ala Asp
          580   585   590

Glu Val Lys Leu Gln Ile Lys Cys Gly Arg Cys Gln Ile Thr Ala Gln
          595   600   605

Ser Phe Ala Glu Ile Lys Phe His Leu Leu Gly Val His Gly Glu Glu
    610   615   620

Ile Glu Gly Arg Leu Gln Glu Gly Thr Phe Pro Gly Ser Lys Gly Thr
625   630   635   640

Gln Glu Glu Leu Val Gln His Ala Ser Pro Asp Trp Lys Arg His Pro
          645   650   655

Glu Arg Gly Lys Pro Glu Lys Val His Ser Ser Ser Glu Glu Ser His
          660   665   670

Ala Cys Pro Arg Leu Lys Arg Gln Leu His Leu His Gln Asn Gly Val
        675   680   685

Glu Met Leu Met Glu Asn Glu Gly Pro Gln Ser Gly Thr Asn Lys Pro
    690   695   700

Arg Glu Thr Cys Gln Gly Pro Glu Cys Pro Gly Leu His Thr Phe Leu
705   710   715   720

Leu Trp Ser His Ser Gly Phe Asn Cys Leu Leu Cys Ala Glu Met Leu
        725   730   735

Gly Arg Lys Glu Asp Leu Leu His His Trp Lys His Gln His Asn Cys

        740   745   750

Glu Asp Pro Ser Lys Leu Trp Ala Ile Leu Asn Thr Val Ser Asn Gln
        755   760   765

Gly Val Ile Glu Leu Ser Ser Glu Ala Glu Lys
    770   775

<210> 4964

<211> 353

<212> PRT

<213> Homo sapiens

<400> 4964

Met Glu Phe Arg Lys Thr Met Asp Ile Asp His Thr Leu Asp Trp Gln
1   5   10   15

Pro Pro Glu Val Ile Gln Lys Tyr Met Pro Gly Gly Leu Cys Gly Tyr
        20   25   30

Asp Arg Asp Gly Cys Pro Val Trp Tyr Asp Ile Thr Gly Pro Leu Asp

```
            35                    40            ·        45
Pro Lys Gly Leu Leu Phe Ser Val Thr Lys Gln Asp Leu Leu Lys Thr
        50                    55                  60
Lys Met Arg Asp Cys Glu Arg Ile Leu His Glu Cys Asp Leu Gln Thr
65                    70                  75                    80
Glu Arg Leu Gly Lys Lys Ile Glu Thr Ile Val Met Ile Phe Asp Cys
                85                    90                  95
Glu Gly Leu Gly Leu Lys His Phe Trp Lys Pro Leu Val Glu Val Tyr
                100                  105                 110
Gln Glu Phe Phe Gly Leu Leu Glu Glu Asn Tyr Pro Glu Thr Leu Lys
            115                  120                 125
Phe Met Leu Ile Val Lys Ala Thr Lys Leu Phe Pro Val Gly Tyr Asn
        130                  135                 140
Leu Met Lys Pro Phe Leu Ser Glu Asp Thr Arg Arg Lys Ile Ile Val
145                  150                 155                    160
Leu Gly Asn Asn Trp Lys Glu Gly Leu Leu Lys Leu Ile Ser Pro Glu
                165                  170                 175
Glu Leu Pro Ala Gln Phe Gly Gly Thr Leu Thr Asp Pro Asp Gly Asn
                180                  185                 190
Pro Lys Cys Leu Thr Lys Ile Asn Tyr Gly Gly Glu Ile Pro Lys Ser
                195                  200                 205
Met Tyr Val Arg Asp Gln Val Lys Thr Gln Tyr Glu His Ser Val Gln
        210                  215                 220
Ile Asn Arg Gly Ser Ser His Gln Val Glu Tyr Glu Ile Leu Phe Pro
225                  230                 235                    240
Gly Cys Val Leu Arg Trp Gln Phe Ser Ser Asp Gly Ala Asp Ile Gly
                245                  250                 255
Phe Gly Val Phe Leu Lys Thr Lys Met Gly Glu Arg Gln Arg Ala Gly
                260                  265                 270
Glu Met Thr Glu Val Leu Pro Ser Gln Arg Tyr Asn Ala His Met Val
        275                  280                 285
Pro Glu Asp Gly Asn Leu Thr Cys Ser Glu Ala Gly Val Tyr Val Glu
        290                  295                 300
Ser Glu Ser Gly Lys Ser Cys Cys His Leu Pro Val Ile Ile Cys Ser
305                  310                 315                    320
His Glu Leu Gln Asn Ser His Ser Asn Ser Gln Val Met Ala Tyr Gln
```

```
                    325                 330                 335
Met Val Arg Lys Cys Lys Leu Ser Arg Pro Leu Pro Leu Pro Ala Ser
                    340                 345                 350
Asn
```

<210> 4965

<211> 606

<212> PRT

<213> Homo sapiens

<400> 4965

```
Met Cys Leu Glu Lys Arg Tyr Leu Asp Val Leu Ser Asp Val Thr Gly
 1                   5                  10                  15
Pro Gln Val Ser Cys Tyr Ile Thr Ala Pro Ser Tyr Val Leu Gln Gln
                    20                  25                  30
Leu Glu Cys Arg Ile Ile Asn His Met Ser Ser Leu Ile Val Gly Asp
                35                  40                  45
Asn Glu Glu Leu Val Ser Asn Val Ile Thr Ile Glu Cys Ser Asp Lys
            50                  55                  60
Glu Lys Arg Val Pro Phe Pro Ile Gly Ile Ala Ile Pro Phe Thr Ala
65                  70                  75                  80
Arg Tyr Arg Gly Asn Tyr Arg Asp Ile Met Val Lys Val Cys Asp Ile
                85                  90                  95
Asn Leu Gln Ser Ser Tyr Leu Asn Pro Asn Ser Leu Glu Gly Met Lys
                100                 105                 110
Gly Gly Tyr Lys Gly Thr Cys Ala Ser Val Lys Val Tyr Lys Leu Gly
            115                 120                 125
Ile Phe Ser Val Val Ser Cys Leu Lys Lys Glu Ser Phe Thr Val Thr
            130                 135                 140
Lys Lys Gly Leu Ala Leu Lys Ser Ser Met Asp Ser Arg Ile Ser Leu
145                 150                 155                 160
Asn Tyr Pro Pro Gly Val Phe Thr Ser Pro Val Leu Val Gln Leu Lys
                165                 170                 175
Ile Gln Pro Val Asp Pro Ala Leu Val Ala His Leu Lys Ala Gln Gln
```

```
                 180                    185                    190
Asp Thr Phe Tyr Ser Val Gln Ser Thr Ser Pro Leu Ile His Ile Gln
            195                    200                    205
His Pro Ser Thr Tyr Pro Phe Gln Lys Pro Val Thr Leu Phe Leu Pro
        210                    215                    220
Cys Ser Pro Tyr Leu Asp Lys Asn Asn Leu Gly Ser Glu Ile Asp His
225                    230                    235                    240
Lys Arg Arg Ala Ser Ala Thr Ile Asn Arg Ile Thr Pro Ser Tyr Phe
                245                    250                    255
Asn Arg Thr Lys Ile Ala Ser Ile Arg Lys Pro Arg Lys Asn Ala Ser
            260                    265                    270
Glu Cys Leu Lys Leu Leu Gly Phe Arg Ser Gln Asp Ser Gly Trp Cys
            275                    280                    285
Gly Leu Asp Asp Val Val Lys Thr Ile Gln Ser Gly Leu Val Ser Val
            290                    295                    300
Glu Leu Tyr Glu His Leu Glu Arg Phe Ile Val Leu His Leu Ser Ser
305                    310                    315                    320
Thr Met Asp Asn Ser His Leu Val Thr Phe Val Lys Ser Leu Glu Glu
                325                    330                    335
Ala Met Leu Ser Thr Thr Ala Cys Ile Val Leu Ser His Gln Lys Asp
            340                    345                    350
Asn Pro His Arg Ile Ala Val Leu Val Val Pro Ser Lys Asp Leu Ser
            355                    360                    365
Gln Val Leu Lys Asp Leu His Leu Glu Gly Phe Gly Gly Pro Pro Glu
        370                    375                    380
Pro Ser Arg His Phe Gln Val Arg Glu Gly Glu Gln Leu Leu Leu Arg
385                    390                    395                    400
Phe Thr Gly Asn Ile Phe Ala Ser Ser Asn Gly Lys Asp Tyr Gly Lys
                405                    410                    415
Asp Tyr Thr Leu Ile Phe His Leu Gln Arg Lys Pro Arg Leu Glu Leu
            420                    425                    430
Gln Ile Lys Glu Val Asp Glu Phe Gly Asn Tyr Ser Cys Pro His Tyr
            435                    440                    445
Lys Gly Thr Ile Val Val Tyr Lys Val Pro Lys Gly Lys Ile Val Pro
        450                    455                    460
Asn Leu Asn Gln Ser Leu Val Ile Asn Glu Asn His Ser Gln Leu Pro
```

```
465                      470                      475                      480
Ile Cys Lys Leu Pro Leu Lys Leu Pro Lys His Lys Lys Leu Ile Asn
                         485                      490                      495
His Pro Gln Ser Thr Lys Arg Val Ser Lys Asp Pro Val Glu Ala Leu
                    500                      505                      510
Trp Asp Asn Leu Leu His Trp Leu Ala Glu Glu Leu Ser Glu Glu Asn
               515                      520                      525
Ala Glu Ser Leu Ser Ser Thr Leu Pro Leu Arg Arg Ser Thr Ile Gln
          530                      535                      540
Leu Ile Lys Leu Lys Asn Pro Asp Asp Leu Thr Glu Gln Ile His Glu
545                      550                      555                      560
Phe Leu Cys Phe Trp Lys Lys Ser Leu Pro Thr Phe Thr Asp Lys Leu
                    565                      570                      575
Arg Leu Leu Ala Arg His Leu Arg Lys Ile Gly Arg Ser Asp Leu Ala
               580                      585                      590
Glu Glu Leu Lys Phe Lys Trp Glu Asn Lys Val Phe Thr Glu
          595                      600                      605


<210> 4966
<211> 151
<212> PRT
<213> Homo sapiens

<400> 4966
Met Ala Thr Ile Thr Met Gln Ala Tyr Ser Arg Gly Phe Leu Ala Arg
1                   5                      10                      15
Arg Arg Tyr Arg Lys Met Leu Glu Glu His Lys Ala Val Ile Leu Gln
                    20                      25                      30
Lys Tyr Ala Arg Ala Trp Leu Ala Arg Arg Arg Phe Gln Ser Ile Arg
          35                      40                      45
Arg Phe Val Leu Asn Ile Gln Leu Thr Tyr Arg Val Gln Arg Leu Gln
     50                      55                      60
Lys Lys Leu Glu Asp Gln Asn Lys Glu Asn His Gly Leu Val Glu Lys
65                      70                      75                      80
Leu Thr Ser Leu Ala Ala Leu Arg Ala Gly Asp Val Glu Lys Ile Gln
```

```
                  85                    90                      95
Lys Leu Glu Ala Glu Leu Glu Lys Ala Ala Thr His Arg Arg Asn Tyr
                 100                   105                     110
Glu Glu Lys Gly Lys Arg Tyr Arg Asp Ala Val Glu Glu Val Ser Cys
             115                   120                   125
Gly Arg Val Arg Arg Asp Gly Asn Met Arg Thr Leu Cys Glu Lys Asp
         130                   135                   140
Glu Arg Cys Gln Leu Phe Leu
145                   150
```

<210> 4967
<211> 731
<212> PRT
<213> Homo sapiens

<400> 4967

```
Met Met Gln Ala Gln Glu Ser Leu Thr Leu Glu Asp Val Ala Val Asp
 1               · 5                    10                      15
Phe Thr Trp Glu Glu Trp Gln Phe Leu Ser Pro Ala Gln Lys Asp Leu
                  20                    25                      30
Tyr Arg Asp Val Met Leu Glu Asn Tyr Ser Asn Leu Val Ala Val Gly
             35                    40                    45
Tyr Gln Ala Ser Lys Pro Asp Ala Leu Ser Lys Leu Glu Arg Gly Glu
         50                    55                    60
Glu Thr Cys Thr Thr Glu Asp Glu Ile Tyr Ser Arg Ile Cys Ser Glu
 65                    70                    75                    80
Ile Arg Lys Ile Asp Asp Pro Leu Gln His His Leu Gln Asn Gln Ser
                  85                    90                      95
Ile Gln Lys Ser Val Lys Gln Cys His Glu Gln Asn Met Phe Gly Asn
                 100                   105                     110
Ile Val Asn Gln Asn Lys Gly His Phe Leu Leu Lys Gln Asp Cys Asp
             115                   120                   125
Thr Phe Asp Leu His Glu Lys Pro Leu Lys Ser Asn Leu Ser Phe Glu
         130                   135                   140
Asn Gln Lys Arg Ser Ser Gly Leu Lys Asn Ser Ala Glu Phe Asn Arg
```

```
145              150                 155                 160
Asp Gly Lys Ser Leu Phe His Ala Asn His Lys Gln Phe Tyr Thr Glu
                 165                 170                 175
Met Lys Phe Pro Ala Ile Ala Lys Pro Ile Asn Lys Ser Gln Phe Ile
                 180                 185                 190
Lys Gln Gln Arg Thr His Asn Ile Glu Asn Ala His Val Cys Ser Glu
                 195                 200                 205
Cys Gly Lys Ala Phe Leu Lys Leu Ser Gln Phe Ile Asp His Gln Arg
             210             215                 220
Val His Thr Gly Glu Lys Pro His Val Cys Ser Met Cys Gly Lys Ala
225              230                 235                 240
Phe Ser Arg Lys Ser Arg Leu Met Asp His Gln Arg Thr His Thr Glu
                 245                 250                 255
Leu Lys His Tyr Glu Cys Thr Glu Cys Asp Lys Thr Phe Leu Lys Lys
                 260                 265                 270
Ser Gln Leu Asn Ile His Gln Lys Thr His Met Gly Gly Lys Pro Tyr
             275             280                 285
Thr Cys Ser Gln Cys Gly Lys Ala Phe Ile Lys Lys Cys Arg Leu Ile
             290             295                 300
Tyr His Gln Arg Thr His Thr Gly Glu Lys Pro His Gly Cys Ser Val
305              310                 315                 320
Cys Gly Lys Ala Phe Ser Thr Lys Phe Ser Leu Thr Thr His Gln Lys
                 325             330                 335
Thr His Thr Gly Glu Lys Pro Tyr Ile Cys Ser Glu Cys Gly Lys Gly
             340             345                 350
Phe Ile Glu Lys Arg Arg Leu Thr Ala His His Arg Thr His Thr Gly
             355             360                 365
Glu Lys Pro Phe Ile Cys Asn Lys Cys Gly Lys Gly Phe Thr Leu Lys
             370             375                 380
Asn Ser Leu Ile Thr His Gln Gln Thr His Thr Gly Glu Lys Leu Tyr
385              390                 395                 400
Thr Cys Ser Glu Cys Gly Lys Gly Phe Ser Met Lys His Cys Leu Met
                 405             410                 415
Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Asn Glu
             420             425                 430
Cys Gly Lys Gly Phe Ala Leu Lys Ser Pro Leu Ile Arg His Gln Arg
```

```
             435                    440                      445
Thr His Thr Gly Glu Lys Pro Tyr Val Cys Thr Glu Cys Arg Lys Gly
         450                    455                      460
Phe Thr Met Lys Ser Asp Leu Ile Val His Gln Arg Thr His Thr Ala
465                    470                      475                    480
Glu Lys Pro Tyr Ile Cys Asn Asp Cys Gly Lys Gly Phe Thr Val Lys
                     485                    490                      495
Ser Arg Leu Ile Val His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr
                 500                    505                      510
Val Cys Gly Glu Cys Gly Lys Gly Phe Pro Ala Lys Ile Arg Leu Met
             515                    520                      525
Gly His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Ile Cys Asn Glu
         530                    535                      540
Cys Gly Lys Gly Phe Thr Glu Lys Ser His Leu Asn Val His Arg Arg
```

```
545                    550                      555                    560
Thr His Thr Gly Glu Lys Pro Tyr Val Cys Ser Glu Cys Gly Lys Asp
                     565                    570                      575
Leu Thr Gly Lys Ser Met Leu Ile Ala His Gln Arg Thr His Thr Gly
                 580                    585                      590
Glu Lys Pro Tyr Ile Cys Asn Glu Cys Gly Lys Gly Phe Thr Met Lys
                 595                    600                      605
Ser Thr Leu Ser Ile His Gln Gln Thr His Thr Gly Glu Lys Pro Tyr
             610                    615                      620
Lys Cys Asn Glu Cys Asp Lys Thr Phe Arg Lys Lys Thr Cys Leu Ile
625                    630                      635                    640
Gln His Gln Arg Phe His Thr Gly Lys Thr Ser Phe Ala Cys Thr Glu
                     645                    650                      655
Cys Gly Lys Phe Ser Leu Arg Lys Asn Asp Leu Ile Thr His Gln Arg
                 660                    665                      670
Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Ser Asp Cys Gly Lys Ala
             675                    680                      685
Phe Thr Thr Lys Ser Gly Leu Asn Val His Gln Arg Lys His Thr Gly
         690                    695                      700
Glu Arg Pro Tyr Gly Cys Ser Asp Cys Gly Lys Ala Phe Ala His Leu
705                    710                      715                    720
```

Ser Ile Leu Val Lys His Arg Arg Ile His Arg
                725   730

<210> 4968

<211> 1186

<212> PRT

<213> Homo sapiens

<400> 4968

Met Tyr Gln Ala Leu Glu Gln Gly Gly Met Thr Phe Gly Trp Val Cys
1   5   10   15

Trp Met Ile Leu Phe Asp Ser Ser Leu Tyr Phe Leu Cys Gly Trp Tyr
          20   25   30

Leu Ser Asn Leu Ile Pro Gly Thr Phe Gly Leu Arg Lys Pro Trp Tyr
          35   40   45

Phe Pro Phe Thr Ala Ser Tyr Trp Lys Ser Val Gly Phe Leu Val Glu
      50   55   60

Lys Arg Gln Tyr Phe Leu Ser Ser Ser Leu Phe Phe Phe Asn Glu Asn
65   70   75   80

Phe Asp Asn Lys Gly Ser Ser Leu Gln Asn Arg Glu Gly Glu Leu Glu
          85   90   95

Gly Ser Ala Pro Gly Val Thr Leu Val Ser Val Thr Lys Glu Tyr Glu
          100   105   110

Gly His Lys Ala Val Val Gln Asp Leu Ser Leu Thr Phe Tyr Arg Asp
          115   120   125

Gln Ile Thr Ala Leu Leu Gly Thr Asn Gly Ala Gly Lys Thr Thr Ile
          130   135   140

Ile Ser Met Leu Thr Gly Leu His Pro Pro Thr Ser Gly Thr Ile Ile
145   150   155   160

Ile Asn Gly Lys Asn Leu Gln Thr Asp Leu Ser Arg Val Arg Met Glu
          165   170   175

Leu Gly Val Cys Pro Gln Gln Asp Ile Leu Leu Asp Asn Leu Thr Val
          180   185   190

Arg Glu His Leu Leu Leu Phe Ala Ser Ile Lys Ala Pro Gln Trp Thr

```
              195                    200                    205
Lys Lys Glu Leu His Gln Gln Val Asn Gln Thr Leu Gln Asp Val Asp
         210                    215                    220
Leu Thr Gln His Gln His Lys Gln Thr Arg Ala Leu Ser Gly Gly Leu
225                    230                    235                    240
Lys Arg Lys Leu Ser Leu Gly Ile Ala Phe Met Gly Met Ser Arg Thr
                   245                    250                    255
Val Val Leu Asp Glu Pro Thr Ser Gly Val Asp Pro Cys Ser Arg His
                   260                    265                    270
Ser Leu Trp Asp Ile Leu Leu Lys Tyr Arg Glu Gly Arg Thr Ile Ile
                   275                    280                    285
Phe Thr Thr His His Leu Asp Glu Ala Glu Ala Leu Ser Asp Arg Val
         290                    295                    300
Ala Val Leu Gln His Gly Arg Leu Arg Cys Cys Gly Pro Pro Phe Cys
305                    310                    315                    320
Leu Lys Glu Ala Tyr Gly Gln Gly Leu Arg Leu Thr Leu Thr Arg Gln
                   325                    330                    335
Pro Ser Val Leu Glu Ala His Asp Leu Lys Asp Met Ala Cys Val Thr
                   340                    345                    350
Ser Leu Ile Lys Ile Tyr Ile Pro Gln Ala Phe Leu Lys Asp Ser Ser
                   355                    360                    365
Gly Ser Glu Leu Thr Tyr Thr Ile Pro Lys Asp Thr Asp Lys Ala Cys
         370                    375                    380
Leu Lys Gly Leu Phe Gln Ala Leu Asp Gly Asn Leu His Gln Leu His
385                    390                    395                    400
Leu Thr Gly Tyr Gly Ile Ser Asp Thr Thr Leu Glu Glu Val Phe Leu
                   405                    410                    415
Met Leu Leu Gln Asp Ser Asn Lys Lys Ser His Ile Ala Leu Gly Thr
                   420                    425                    430
Glu Ser Glu Leu Gln Asn His Arg Pro Thr Gly His Leu Ser Gly Tyr
         435                    440                    445
Cys Gly Ser Leu Ala Arg Pro Ala Thr Val Gln Gly Val Gln Leu Leu
         450                    455                    460
Arg Ala Gln Val Ala Ala Ile Leu Ala Arg Arg Leu Arg Arg Thr Leu
465                    470                    475                    480
Arg Ala Gly Lys Ser Thr Leu Ala Asp Leu Leu Leu Pro Val Leu Phe
```

```
                485                      490                      495
Val Ala Leu Ala Met Gly Leu Phe Met Val Arg Pro Leu Ala Thr Glu
                500                      505                      510
Tyr Pro Pro Leu Arg Leu Thr Pro Gly His Tyr Gln Arg Ala Glu Thr
                515                      520                      525
Tyr Phe Phe Ser Ser Gly Gly Asp Asn Leu Asp Leu Thr Arg Val Leu
                530                      535                      540
Leu Arg Lys Phe Arg Asp Gln Asp Leu Pro Cys Ala Asp Leu Asn Pro
545                      550                      555                      560
Arg Gln Lys Asn Ser Ser Cys Trp Arg Thr Asp Pro Phe Ser His Pro
                565                      570                      575
Glu Phe Gln Asp Ser Cys Gly Cys Leu Lys Arg Pro Asn Arg Ser Ala
                580                      585                      590
Ser Ala Pro Tyr Leu Thr Asn His Leu Gly His Thr Leu Leu Asn Leu
                595                      600                      605
Ser Gly Phe Asn Met Glu Glu Tyr Leu Leu Ala Pro Ser Glu Lys Pro
                610                      615                      620
Arg Leu Gly Gly Trp Ser Phe Gly Leu Lys Ile Pro Ser Glu Ala Gly
625                      630                      635                      640
Gly Ala Asn Gly Asn Ile Ser Lys Pro Pro Thr Leu Ala Lys Val Trp
                645                      650                      655
Tyr Asn Gln Lys Gly Phe His Ser Leu Pro Ser Tyr Leu Asn His Leu
                660                      665                      670
Asn Asn Leu Ile Leu Trp Gln His Leu Pro Pro Thr Val Asp Trp Arg
                675                      680                      685
Gln Tyr Gly Ile Thr Leu Tyr Ser His Pro Tyr Gly Gly Ala Leu Leu
                690                   '  695                      700
Asn Glu Asp Lys Ile Leu Glu Ser Ile Arg Gln Cys Gly Val Ala Leu
705                      710                      715                      720
Cys Ile Val Leu Gly Phe Ser Ile Leu Ser Ala Ser Ile Gly Ser Ser
                725                      730                      735
Val Val Arg Asp Arg Val Ile Gly Ala Lys Arg Leu Gln His Ile Ser
                740                      745                      750
Gly Leu Gly Tyr Arg Met Tyr Trp Phe Thr Asn Phe Leu Tyr Asp Met
                755                      760                      765
Leu Phe Tyr Leu Val Ser Val Cys Leu Cys Val Ala Val Ile Val Ala
```

```
     770                  775                  780
Phe Gln Leu Thr Ala Phe Thr Phe Arg Lys Asn Leu Ala Ala Thr Ala
785                  790                  795                  800
Leu Leu Leu Ser Leu Phe Gly Tyr Ala Thr Leu Pro Trp Met Tyr Leu
                  805                  810                  815
Met Ser Arg Ile Phe Ser Ser Ser Asp Val Ala Phe Ile Ser Tyr Val
                  820                  825                  830
Ser Leu Asn Phe Ile Phe Gly Leu Cys Thr Met Leu Ile Thr Ile Met
                  835                  840                  845
Pro Arg Leu Leu Ala Ile Ile Ser Lys Ala Lys Asn Leu Gln Asn Ile
                  850                  855                  860
Tyr Asp Val Leu Lys Trp Val Phe Thr Ile Phe Pro Gln Phe Cys Leu
865                  870                  875                  880
Gly Gln Gly Leu Val Glu Leu Cys Tyr Asn Gln Thr Lys Tyr Asp Leu
                  885                  890                  895
Thr His Asn Phe Gly Ile Asp Ser Tyr Val Ser Pro Phe Glu Met Asn
                  900                  905                  910
Phe Leu Gly Trp Ile Phe Val Gln Leu Ala Ser Gln Gly Thr Val Leu
                  915                  920                  925
Leu Leu Leu Arg Val Leu Leu His Trp Asp Leu Leu Arg Trp Pro Arg
                  930       ·          935                  940
Gly His Ser Thr Leu Gln Gly Thr Val Lys Ser Ser Lys Asp Thr Asp
945                  950                  955                  960
Val Glu Lys Glu Glu Lys Arg Val Phe Glu Gly Arg Thr Asn Gly Asp
                  965                  970                  975
Ile Leu Val Leu Tyr Asn Leu Ser Lys His Tyr Arg Arg Phe Phe Gln
                  980                  985                  990
Asn Ile Ile Ala Val Gln Asp Ile Ser Leu Gly Ile Pro Lys Gly Glu
                  995                  1000                 1005
Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys Ser Thr Thr Phe
                  1010                 1015                 1020
Lys Met Leu Asn Gly Glu Val Ser Leu Thr Ser Gly His Ala Ile Ile
1025                 1030                 1035                 1040
Arg Thr Pro Met Gly Asp Ala Val Asp Leu Ser Ser Ala Gly Thr Ala
                  1045                 1050                 1055
Gly Val Leu Ile Gly Tyr Cys Pro Gln Gln Asp Ala Leu Asp Glu Leu
```

```
              1060                    1065                    1070
Leu Thr Gly Trp Glu His Leu Tyr Tyr Tyr Cys Ser Leu Arg Gly Ile
          1075                    1080                    1085
Pro Arg Gln Cys Ile Pro Glu Val Ala Gly Asp Leu Ile Arg Arg Leu
      1090                    1095                    1100
His Leu Glu Ala His Ala Asp Lys Pro Val Ala Thr Tyr Ser Gly Gly
1105                    1110                    1115                    1120
Thr Lys Arg Lys Leu Ser Thr Ala Leu Ala Leu Val Gly Lys Pro Asp
              1125                    1130                    1135
Ile Leu Leu Leu Asp Glu Pro Ser Ser Gly Met Asp Pro Cys Ser Lys
          1140                    1145                    1150
Arg Tyr Leu Trp Gln Thr Ile Met Lys Glu Val Arg Glu Gly Cys Ala
          1155                    1160                    1165
Ala Val Leu Thr Ser His Arg Phe Trp Tyr Gln Asp Asp Ala Gly Leu
      1170                    1175                    1180
Ile Lys
1185
```

```
<210> 4969
<211> 140
<212> PRT
<213> Homo sapiens

<400> 4969
Met Tyr Ile Phe Phe Phe Phe Leu Lys Gln Met Ser Phe Asp Pro Asn
1               5                    10                   15
Leu Leu His Asn Asn Gly His Asn Gly Tyr Pro Asn Gly Thr Ser Ala
              20                   25                   30
Ala Leu Arg Glu Thr Gly Val Ile Glu Lys Leu Leu Thr Ser Tyr Gly
          35                   40                   45
Phe Ile Gln Cys Ser Glu Arg Gln Ala Arg Leu Phe Phe His Cys Ser
      50                   55                   60
Gln Tyr Asn Gly Asn Leu Gln Asp Leu Lys Val Gly Gly Asn Leu Ser
65                   70                   75                   80
Val Leu Leu Cys Lys Asn Val Ile Thr Lys Phe Val Leu His Ile Asn
```

```
                      85                    90                    95
Leu Phe Met Ser Val Phe Gln Lys Val Leu Cys Lys Leu Lys His Phe
                100                   105                   110
Gly Leu Leu Val Val Leu Phe Ser Glu Glu Tyr Leu Tyr Lys Pro Ala
            115                   120                   125
Glu Ser Leu Lys Asp Tyr Ile Cys Ile Tyr Leu Gln
        130                   135                   140



<210> 4970
<211> 177
<212> PRT
<213> Homo sapiens


<400> 4970
Met Ser Ser Glu Thr Pro Thr Ser Arg Gln Leu Ser Glu Tyr Leu Lys
 1               5                    10                   15
His Ala Lys Gly Arg Thr Arg Thr Ala Ile Arg Asn Gly Gln Val Trp
                20                   25                   30
Glu Glu Ser Leu Lys Arg Leu Arg Gln Lys Ala Ser Leu Thr Asn Val
            35                   40                   45
Thr Asp Pro Ser Leu Asp Leu Thr Ser Leu Ser Leu Glu Val Gly Cys
        50                   55                   60
Gly Ala Pro Ala Pro Val Val Arg Cys Asp Pro Cys Ser Pro Tyr Arg
65                   70                   75                   80
Thr Ile Thr Gly Asp Cys Asn Asn Arg Trp Arg Gly Leu Gly Cys Gly
                85                   90                   95
Gly Arg Pro Phe Gln Pro Leu Arg Pro Ala Leu Pro Arg Pro Leu Ser
                100                  105                  110
Leu Gly His Ser Arg Gln Ile Cys His Cys Leu Ala His Leu Gly Trp
            115                  120                  125
Arg Ser His Leu Pro His Leu Leu Lys Ile Ala Arg Leu Gln Pro Ser
        130                  135                  140
Pro Ser Ser Pro Leu Cys Val Ser Gly Ser Gly Thr Phe Pro Arg Gly
145                  150                  155                  160
Gly Gly Ala Pro Arg Leu Gln Gly Val Gly Ala Val Gln Arg Pro Gln
```

<pre>
                    165   170   175
Ile
</pre>

<210> 4971

<211> 930

<212> PRT

<213> Homo sapiens

<400> 4971

<pre>
Met Ala Gly Ala Ala Ala Ala Val Ala Ala Gly Ala Ala Ala Gly Ala
  1   5   10   15
Ala Ala Ala Ala Val Ser Val Ala Ala Pro Gly Arg Ala Ser Ala Pro
                 20   25   30
Pro Pro Pro Pro Pro Val Tyr Cys Val Cys Arg Gln Pro Tyr Asp Val
                 35   40   45
Asn Arg Phe Met Ile Glu Cys Asp Ile Cys Lys Asp Trp Phe His Gly
             50   55   60
Ser Cys Val Gly Val Glu Glu His His Ala Val Asp Ile Asp Leu Tyr
 65   70   75   80
His Cys Pro Asn Cys Ala Val Leu His Gly Ser Ser Leu Met Lys Lys
                 85   90   95
Arg Arg Asn Trp His Arg His Asp Tyr Thr Glu Ile Asp Asp Gly Ser
                100   105   110
Lys Pro Val Gln Ala Gly Thr Arg Thr Phe Ile Lys Glu Leu Arg Ser
                115   120   125
Arg Val Phe Pro Ser Ala Asp Glu Ile Ile Ile Lys Met His Gly Ser
                130   135   140
Gln Leu Thr Gln Arg Tyr Leu Glu Lys His Gly Phe Asp Val Pro Ile
145   150   155   160
Met Val Pro Lys Leu Asp Asp Leu Gly Leu Arg Leu Pro Ser Pro Thr
                165   170   175
Phe Ser Val Met Asp Val Glu Arg Tyr Val Gly Gly Asp Lys Val Ile
                180   185   190
Asp Val Ile Asp Val Ala Arg Gln Ala Asp Ser Lys Met Thr Leu His
</pre>

```
            195                    200                    205
Asn Tyr Val Lys Tyr Phe Met Asn Pro Asn Arg Pro Lys Val Leu Asn
            210                    215                    220
Val Ile Ser Leu Glu Phe Ser Asp Thr Lys Met Ser Glu Leu Val Glu
225                    230                    235                    240
Val Pro Asp Ile Ala Lys Lys Leu Ser Trp Val Glu Asn Tyr Trp Pro
                       245                    250                    255
Asp Asp Ser Val Phe Pro Lys Pro Phe Val Gln Lys Tyr Cys Leu Met
                       260                    265                    270
Gly Val Gln Asp Ser Tyr Thr Asp Phe His Ile Asp Phe Gly Gly Thr
                       275                    280                    285
Ser Val Trp Tyr His Val Leu Trp Gly Glu Lys Ile Phe Tyr Leu Ile
            290                    295                    300
Lys Pro Thr Asp Glu Asn Leu Ala Arg Tyr Glu Ser Trp Ser Ser Ser
305                    310                    315                    320
Val Thr Gln Ser Glu Val Phe Phe Gly Asp Lys Val Asp Lys Cys Tyr
                       325                    330                    335
Lys Cys Val Val Lys Gln Gly His Thr Leu Phe Val Pro Thr Gly Trp
                       340                    345                    350
Ile His Ala Val Leu Thr Ser Gln Asp Cys Met Ala Phe Gly Gly Asn
                       355                    360                    365
Phe Leu His Asn Leu Asn Ile Gly Met Gln Leu Arg Cys Tyr Glu Met
            370                    375                    380
Glu Lys Arg Leu Lys Thr Pro Asp Leu Phe Lys Phe Pro Phe Phe Glu
385                    390                    395                    400
Ala Ile Cys Trp Phe Val Ala Lys Asn Leu Leu Glu Thr Leu Lys Glu
                       405                    410                    415
Leu Arg Glu Asp Gly Phe Gln Pro Gln Thr Tyr Leu Val Gln Gly Val
                       420                    425                    430
Lys Ala Leu His Thr Ala Leu Lys Leu Trp Met Lys Lys Glu Leu Val
            435                    440                    445
Ser Glu His Ala Phe Glu Ile Pro Asp Asn Val Arg Pro Gly His Leu
            450                    455                    460
Ile Lys Glu Leu Ser Lys Val Ile Arg Ala Ile Glu Glu Glu Asn Gly
465                    470                    475                    480
Lys Pro Val Lys Ser Gln Gly Ile Pro Ile Val Cys Pro Val Ser Arg
```

```
                  485                    490                    495
Ser Ser Asn Glu Ala Thr Ser Pro Tyr His Ser Arg Arg Lys Met Arg
            500                    505                    510
Lys Leu Arg Asp His Asn Val Arg Thr Pro Ser Asn Leu Asp Ile Leu
            515                    520                    525
Glu Leu His Thr Arg Glu Val Leu Lys Arg Leu Glu Met Cys Pro Trp
        530                    535                    540
Glu Glu Asp Ile Leu Ser Ser Lys Leu Asn Gly Lys Phe Asn Lys His
545                    550                    555                    560
Leu Gln Pro Ser Ser Thr Val Pro Glu Trp Arg Ala Lys Asp Asn Asp
                565                    570                    575
Leu Arg Leu Leu Leu Thr Asn Gly Arg Ile Ile Lys Asp Glu Arg Gln
            580                    585                    590
Pro Phe Ala Asp Gln Ser Leu Tyr Thr Ala Asp Ser Glu Asn Glu Glu
            595                    600                    605
Asp Lys Arg Arg Thr Lys Lys Ala Lys Met Lys Ile Glu Glu Ser Ser
        610                    615                    620
Gly Val Glu Gly Val Glu His Glu Glu Ser Gln Lys Pro Leu Asn Gly
625                    630                    635                    640
Phe Phe Thr Arg Val Lys Ser Glu Leu Arg Ser Arg Ser Ser Gly Tyr
                645                    650                    655
Ser Asp Ile Ser Glu Ser Glu Asp Ser Gly Pro Glu Cys Thr Ala Leu
            660                    665                    670
Lys Ser Ile Phe Thr Thr Glu Glu Ser Glu Ser Ser Gly Asp Glu Lys
            675                    680                    685
Lys Gln Glu Ile Thr Ser Asn Phe Lys Glu Glu Ser Asn Val Met Arg
        690                    695                    700
Asn Phe Leu Gln Lys Ser Gln Lys Pro Ser Arg Ser Glu Ile Pro Ile
705                    710                    715                    720
Lys Arg Glu Cys Pro Thr Ser Thr Ser Thr Glu Glu Glu Ala Ile Gln
                725                    730                    735
Gly Met Leu Ser Met Ala Gly Leu His Tyr Ser Thr Cys Leu Gln Arg
            740                    745                    750
Gln Ile Gln Ser Thr Asp Cys Ser Gly Glu Arg Asn Ser Leu Gln Asp
        755                    760                    765
Pro Ser Ser Cys His Gly Ser Asn His Glu Val Arg Gln Leu Tyr Arg
```

```
          770              775              780
Tyr Asp Lys Pro Val Glu Cys Gly Tyr His Val Lys Thr Glu Asp Pro
785              790              795              800
Asp Leu Arg Thr Ser Ser Trp Ile Lys Gln Phe Asp Thr Ser Arg Phe
             805              810              815
His Pro Gln Asp Leu Ser Arg Ser Gln Lys Cys Ile Arg Lys Glu Gly
             820              825              830
Ser Ser Glu Ile Ser Gln Arg Val Gln Ser Arg Asn Tyr Val Asp Ser
             835              840              845
Ser Gly Ser Ser Leu Gln Asn Gly Lys Tyr Met Gln Asn Ser Asn Leu
             850              855              860
Thr Ser Gly Ala Cys Gln Ile Ser Asn Gly Ser Leu Ser Pro Glu Arg
865              870              875              880
Pro Val Gly Glu Thr Ser Phe Ser Val Pro Leu His Pro Thr Lys Arg
             885              890              895
Pro Ala Ser Asn Pro His Leu Ser Ala Thr Arg Gln Gln Lys Val Asn
             900              905              910
Val Gln Lys Lys Glu Trp Gln Gln Pro Asn Asn Val Leu Gly Arg Ser
             915              920              925
Leu Ser
   930
```

<210> 4972

<211> 755

<212> PRT

<213> Homo sapiens

<400> 4972

```
Met Arg Lys Val Lys Lys Leu Arg Leu Asp Lys Glu Asn Thr Gly Ser
  1              5               10               15
Trp Arg Ser Phe Ser Leu Asn Ser Glu Gly Ala Glu Arg Met Ala Thr
             20               25               30
Ser Tyr Asp Phe His Ser Glu Ser Gly Leu Phe Leu Phe Gln Ala Ser
             35               40               45
Asn Ser Leu Phe His Cys Arg Asp Gly Gly Lys Asn Gly Phe Met Val
```

```
                  50                      55                      60
Ser Pro Met Lys Pro Leu Glu Ile Lys Thr Gln Cys Ser Gly Pro Arg
 65                      70                      75                      80
Met Asp Pro Lys Ile Cys Pro Ala Asp Pro Ala Phe Phe Ser Phe Ile
                        85                      90                      95
Asn Asn Ser Asp Leu Trp Val Ala Asn Ile Glu Thr Gly Glu Glu Arg
                       100                     105                     110
Arg Leu Thr Phe Cys His Gln Gly Leu Ser Asn Val Leu Asp Asp Pro
                       115                     120                     125
Lys Ser Ala Gly Val Ala Thr Phe Val Ile Gln Glu Glu Phe Asp Arg
                       130                     135                     140
Phe Thr Gly Tyr Trp Trp Cys Pro Thr Ala Ser Trp Glu Gly Ser Glu
145                     150                     155                     160
Gly Leu Lys Thr Leu Arg Ile Leu Tyr Glu Glu Val Asp Glu Ser Glu
                       165                     170                     175
Val Glu Val Ile His Val Pro Ser Pro Ala Leu Glu Glu Arg Lys Thr
                       180                     185                     190
Asp Ser Tyr Arg Tyr Pro Arg Thr Gly Ser Lys Asn Pro Lys Ile Ala
                       195                     200                     205
Leu Lys Leu Ala Glu Phe Gln Thr Asp Ser Gln Gly Lys Ile Val Ser
                       210                     215                     220
Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu Phe Pro Lys
225                     230                     235                     240
Val Glu Tyr Ile Ala Arg Ala Gly Trp Thr Arg Asp Gly Lys Tyr Ala
                       245                     250                     255
Trp Ala Met Phe Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu
                       260                     265                     270
Leu Pro Pro Ala Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg
                       275                     280                     285
Leu Ala Ser Ala Arg Ala Val Pro Arg Asn Val Gln Pro Tyr Val Val
                       290                     295                     300
Tyr Glu Glu Val Thr Asn Val Trp Ile Asn Val His Asp Ile Phe Tyr
305                     310                     315                     320
Pro Phe Pro Gln Ser Glu Gly Glu Asp Glu Leu Cys Phe Leu Arg Ala
                       325                     330                     335
```

Asn Glu Cys Lys Thr Gly Phe Cys His Leu Tyr Lys Val Thr Ala Val
              340   345   350

Leu Lys Ser Gln Gly Tyr Asp Trp Ser Glu Pro Phe Ser Pro Gly Glu
              355   360   365

Asp Glu Phe Lys Cys Pro Ile Lys Glu Glu Ile Ala Leu Thr Ser Gly
     370   375   380

Glu Trp Glu Val Leu Ala Arg His Gly Ser Lys Ile Trp Val Asn Glu
385   390   395   400

Glu Thr Lys Leu Val Tyr Phe Gln Gly Thr Lys Asp Thr Pro Leu Glu
              405   410   415

His His Leu Tyr Val Val Ser Tyr Glu Ala Ala Gly Glu Ile Val Arg
              420   425   430

Leu Thr Thr Pro Gly Phe Ser His Ser Cys Ser Met Ser Gln Asn Phe
              435   440   445

Asp Met Phe Val Ser His Tyr Ser Ser Val Ser Thr Pro Pro Cys Val
     450   455   460

His Val Tyr Lys Leu Ser Gly Pro Asp Asp Asp Pro Leu His Lys Gln
465   470   475   480

Pro Arg Phe Trp Ala Ser Met Met Glu Ala Ala Ser Cys Pro Pro Asp
              485   490   495

Tyr Val Pro Pro Glu Ile Phe His Phe His Thr Arg Ser Asp Val Arg
              500   505   510

Leu Tyr Gly Met Ile Tyr Lys Pro His Ala Leu Gln Pro Gly Lys Lys
              515   520   525

His Pro Thr Val Leu Phe Val Tyr Gly Gly Pro Gln Val Gln Leu Val
     530   535   540

Asn Asn Ser Phe Lys Gly Ile Lys Tyr Leu Arg Leu Asn Thr Leu Ala
545   550   555   560

Ser Leu Gly Tyr Ala Val Val Val Ile Asp Gly Arg Gly Ser Cys Gln
              565   570   575

Arg Gly Leu Arg Phe Glu Gly Ala Leu Lys Asn Gln Met Gly Gln Val
              580   585   590

Glu Ile Glu Asp Gln Val Glu Gly Pro Gln Phe Val Ala Glu Lys Tyr
              595   600   605

Gly Phe Ile Asp Leu Ser Arg Val Ala Ile His Gly Trp Ser Tyr Gly
     610   615   620

Gly Phe Leu Ser Leu Met Gly Leu Ile His Lys Pro Gln Val Phe Lys
625   630   635   640

Val Ala Ile Ala Gly Ala Pro Val Thr Val Trp Met Ala Tyr Asp Thr
                645   650   655

Gly Tyr Thr Glu Arg Tyr Met Asp Val Pro Glu Asn Asn Gln His Gly
                660   665   670

Tyr Glu Ala Gly Ser Val Ala Leu His Val Glu Lys Leu Pro Asn Glu
                675   680   685

Pro Asn Arg Leu Leu Ile Leu His Gly Phe Leu Asp Glu Asn Val His
                690   695   700

Phe Phe His Thr Asn Phe Leu Val Ser Gln Leu Ile Arg Ala Gly Lys
705   710   715   720

Pro Tyr Gln Leu Gln Ile Tyr Pro Asn Glu Arg His Ser Ile Arg Cys
                725   730   735

Pro Glu Ser Gly Glu His Tyr Glu Val Thr Leu Leu His Phe Leu Gln
                740   745   750

Glu Tyr Leu
        755

<210> 4973

<211> 268

<212> PRT

<213> Homo sapiens

<400> 4973

Met Ala Ala Ala Ile Thr Asp Met Ala Asp Leu Glu Glu Leu Ser Arg
1   5   10   15

Leu Ser Pro Leu Pro Pro Gly Ser Pro Gly Ser Ala Ala Arg Gly Arg
                20   25   30

Ala Glu Pro Pro Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu
                35   40   45

Ala Glu Ala Glu Ala Val Ala Ala Leu Leu Leu Asn Gly Gly Ser Gly
                50   55   60

Gly Gly Gly Gly Gly Gly Gly Gly Val Gly Gly Gly Glu Ala Glu
65   70   75   80

```
Thr Met Ser Glu Pro Ser Pro Glu Ser Ala Ser Gln Ala Gly Glu Asp
              85                  90                  95
Glu Asp Glu Glu Glu Asp Asp Glu Glu Glu Glu Asp Glu Ser Ser Ser
             100                 105                 110
Ser Gly Gly Gly Glu Glu Glu Ser Ser Ala Glu Ser Leu Val Gly Ser
             115                 120                 125
Ser Gly Gly Ser Ser Ser Asp Glu Thr Arg Ser Leu Ser Pro Gly Ala
         130                 135                 140
Ala Ser Ser Ser Ser Gly Asp Gly Asp Gly Lys Glu Gly Leu Glu Glu
145                 150                 155                 160
Pro Lys Gly Pro Arg Gly Ser Gln Gly Gly Gly Gly Gly Gly Ser Ser
                 165                 170                 175
Ser Ser Ser Val Val Ser Ser Gly Gly Asp Glu Gly Tyr Gly Thr Gly
             180                 185                 190
Gly Gly Gly Ser Ser Ala Thr Ser Gly Gly Arg Arg Gly Ser Leu Glu
         195                 200                 205
Met Ser Ser Asp Gly Glu Pro Leu Ser Arg Met Asp Ser Glu Asp Ser
    210                 215                 220
Ile Ser Ser Thr Ile Met Asp Val Asp Ser Thr Ile Ser Ser Gly Arg
225                 230                 235                 240
Ser Thr Pro Ala Met Met Asn Gly Gln Gly Ser Thr Thr Ser Ser Ser
                 245                 250                 255
Lys Asn Ile Ala Tyr Asn Cys Cys Trp Asp Gln Cys
                 260                 265
```

<210> 4974
<211> 160
<212> PRT
<213> Homo sapiens

<400> 4974

```
Met Leu Gly Glu Arg Pro Leu Cys Leu Thr Pro Gly Ala Lys Leu Gly
1               5                   10                  15
Leu His His Trp Ile Ile Arg Cys Phe Gln Arg Arg Pro Ser Pro His
                20                  25                  30
```

Pro Asp Gln Gly Asn Trp Asp Asp Val Gly Pro Leu Thr Leu Ser Asp
       35   40   45

Met Gln Pro Gly Trp Arg Leu Gly Gln Pro Pro Cys Arg Ser Glu Ser
       50   55   60

Phe Ser Pro Cys His Leu Lys Ser Lys Ser Leu Leu Thr Gln Ala Leu
65   70   75   80

Pro Gly Met Cys Ser Pro Ala Thr Glu Pro Glu Ala Ala Leu Leu Leu
           85   90   95

Ser Pro Val Gly Thr Ala Phe Gln Thr Gln Asn Thr Glu Phe Thr Ala
          100   105   110

Ser Phe Gly Ile Phe Pro Asn Arg Leu Thr Val Pro Ile Ala Ser Asp
          115   120   125

Pro Phe Gln Tyr Ser Cys Thr Arg Asn Val Met Val Lys Asn Lys Lys
          130   135   140

Pro Pro Val Met Glu Gly Arg Asn Met Asn Gln Leu Lys Ala Phe His
145   150   155   160

<210> 4975

<211> 411

<212> PRT

<213> Homo sapiens

<400> 4975

Met Thr Glu Met Ser Glu Lys Glu Asn Glu Pro Asp Asp Ala Ala Thr
1   5   10   15

His Ser Pro Pro Gly Thr Val Ser Ala Leu Gln Glu Thr Lys Leu Gln
          20   25   30

Arg Phe Lys Arg Ser Leu Ser Leu Lys Thr Ile Leu Arg Ser Lys Ser
          35   40   45

Leu Glu Asn Phe Phe Leu Arg Ser Gly Ser Glu Leu Lys Cys Pro Thr
          50   55   60

Glu Val Leu Leu Thr Pro Pro Thr Pro Leu Pro Pro Pro Ser Pro Pro
65   70   75   80

Pro Thr Ala Ser Asp Arg Gly Leu Ala Thr Pro Ser Pro Ser Pro Cys
          85   90   95

```
Pro Val Pro Arg Pro Leu Ala Ala Leu Lys Pro Val Arg Leu His Ser
            100               105               110
Phe Gln Glu His Val Phe Lys Arg Ala Ser Pro Cys Glu Leu Cys His
            115               120               125
Gln Leu Ile Val Gly Asn Ser Lys Gln Gly Leu Arg Cys Lys Met Cys
        130               135               140
Lys Val Ser Val His Leu Trp Cys Ser Glu Glu Ile Ser His Gln Gln
145               150               155               160
Cys Pro Gly Lys Thr Ser Thr Ser Phe Arg Arg Asn Phe Ser Ser Pro
                165               170               175
Leu Leu Val His Glu Pro Pro Pro Val Cys Ala Thr Ser Lys Glu Ser
            180               185               190
Pro Pro Thr Gly Asp Ser Gly Lys Val Asp Pro Val Tyr Glu Thr Leu
            195               200               205
Arg Tyr Gly Thr Ser Leu Ala Leu Met Asn Arg Ser Ser Phe Ser Ser
    210               215               220
Thr Ser Glu Ser Pro Thr Arg Ser Leu Ser Glu Arg Asp Glu Leu Thr
225               230               235               240
Glu Asp Gly Glu Gly Ser Ile Arg Ser Ser Glu Glu Gly Pro Gly Asp
                245               250               255
Ser Ala Ser Pro Val Phe Thr Ala Pro Ala Glu Ser Glu Gly Pro Gly
            260               265               270
Pro Glu Glu Lys Ser Pro Gly Gln Gln Leu Pro Lys Ala Thr Leu Arg
            275               280               285
Lys Asp Val Gly Pro Met Tyr Ser Tyr Val Ala Leu Tyr Lys Phe Leu
    290               295               300
Pro Gln Glu Asn Asn Asp Leu Ala Leu Gln Pro Gly Asp Arg Ile Met
305               310               315               320
Leu Val Asp Asp Ser Asn Glu Asp Trp Trp Lys Gly Lys Ile Gly Asp
                325               330               335
Arg Val Gly Phe Phe Pro Ala Asn Phe Val Gln Arg Val Arg Pro Gly
            340               345               350
Glu Asn Val Trp Arg Cys Cys Gln Pro Phe Ser Gly Asn Lys Glu Gln
            355               360               365
Gly Tyr Met Ser Leu Lys Glu Asn Gln Ile Cys Val Gly Val Gly Arg
    370               375               380
```

Ser Lys Asp Ala Asp Gly Phe Ile Arg Val Ser Ser Gly Lys Lys Arg
385   390   395   400

Gly Leu Val Pro Val Asp Ala Leu Thr Glu Ile
                405   410

<210> 4976
<211> 129
<212> PRT
<213> Homo sapiens

<400> 4976
Met Leu Ser Ala Gly Gly Cys Ile Leu Leu Pro Val His Ile Val Cys
 1   5   10   15
Ala Trp Asp Gly His Glu Ser Gly Gly Arg Ala Gly Val Leu Ala Leu
                20   25   30
Gly Tyr Phe Gly Glu Thr Ile Arg Phe Lys Glu Gly Asn Thr Phe Ser
            35   40   45
Gly Pro Val Pro Gln Asn Thr Thr Ile Thr Arg Gly Arg His Leu Ala
        50   55   60
Glu Leu Ser Pro Thr Gly Thr Ser Gly Pro Trp Phe Leu His Pro Gln
65   70   75   80
Ser Ala Ser Phe His Ser Arg Gln Asn Gln Gly Ile Phe Gln Gly Gln
                85   90   95
Val Ser His Pro Leu Gly Ala Gly Ile Leu Ser His Ser Lys Thr Asn
            100   105   110
Phe Gln Val Pro Gly Leu Leu Gly Asn Pro Lys Arg Leu Ser Pro Ala
            115   120   125
Glu

<210> 4977
<211> 156
<212> PRT
<213> Homo sapiens

<400> 4977

Met Gln Thr Glu Asp Ile Arg Leu Glu Pro Asp Leu Tyr Glu Ala Cys
1   5   10   15

Lys Ser Asp Ile Lys Asn Phe Cys Ser Ala Val Gln Tyr Gly Asn Ala
                20   25   30

Gln Ile Ile Glu Cys Leu Lys Glu Asn Lys Lys Gln Leu Ser Thr Arg
        35   40   45

Cys His Gln Lys Val Phe Lys Leu Gln Glu Thr Glu Met Met Asp Pro
        50   55   60

Glu Leu Asp Tyr Thr Leu Met Arg Val Cys Lys Gln Met Ile Lys Arg
65   70   75   80

Phe Cys Pro Glu Ala Asp Ser Lys Thr Met Leu Gln Cys Leu Lys Gln
                85   90   95

Asn Lys Asn Ser Glu Leu Met Asp Pro Lys Cys Lys Gln Met Ile Thr
                100   105   110

Lys Arg Gln Ile Thr Gln Asn Thr Gly Lys Ile Leu Ala Trp Leu Ser
                115   120   125

Trp Pro Arg Gly Val Ser Glu Lys Glu Phe Ser Gly Cys Arg Val Thr
        130   135   140

Cys Ser Asn Ser Gln Gly Phe Val Ala Trp Glu Phe
145   150   155

<210> 4978
<211> 183
<212> PRT
<213> Homo sapiens

<400> 4978

Met Glu Leu Ala Ala Leu Gly Leu Ser Pro Cys Pro Arg Leu Leu His
1   5   10   15

Ala Glu Leu Leu Pro Gly Leu Leu Thr Val Phe Ser Leu Arg Phe Leu
                20   25   30

Gln Asp Tyr Gly Gly Tyr Leu Ser Thr Tyr Ile Leu Pro Ala Lys Gly

```
          35                  40                  45
Glu Asn Gln Gly Gln Thr Phe Thr Cys Gly Ser Ala Leu Ser Pro Ile
      50                  55                  60
Thr Asp Phe Lys Leu Tyr Ala Ser Ala Phe Ser Glu Arg Tyr Leu Gly
 65                  70                  75                  80
Leu His Gly Thr Arg Asp Asn Ala Val Pro Ala Ala Ala Pro Pro Pro
                  85                  90                  95
Gly Ala Arg Glu Thr Gly Thr Pro Arg Pro Leu Pro Gln Gly Thr Glu
                 100                 105                 110
Gln Arg Met Val Ala Ala Gly Pro Thr Arg Ala His Arg Thr Pro Ala
                 115                 120                 125
Pro Arg Phe Gln Pro Pro Ser Gly Ser Met Arg Pro Ala His Thr Ser
     130                 135                 140
Leu Cys Val Pro Val Arg Asp Ile Thr Pro Cys Leu Thr Ser Gln Cys
145                 150                 155                 160
His Gly Arg Ser Ser Tyr Ser Thr Ile Val Leu Ala Val Arg Val His
                 165                 170                 175
Ile Trp Ala Cys Tyr Phe Leu
                 180
```

<210> 4979

<211> 579

<212> PRT

<213> Homo sapiens

<400> 4979

```
Met Lys Asp Lys Ser Asn Gly Leu Glu Ser Gln Val Asn Gln Cys Asp
 1                   5                  10                  15
Lys Met Leu Gly Gly Asp Ala Leu Val Thr Asp Leu Leu Val Asp Phe
                  20                  25                  30
Cys Gly Ser Arg Ser Gly Val Glu Ile Pro Arg Thr Pro Gln Leu Tyr
                  35                  40                  45
Val Ala His Glu Ile Gly Thr Ile Lys Thr Val Thr Pro Pro Glu Asp
     50                  55                  60
Arg Asp Ser Glu Ser Gly Val Val Gly Gly Gln Gly Thr Leu Gln Glu
```

```
     65                    70                    75                    80
Pro Gly Phe Gly Glu Ala Ser Glu Ala Ile Ser Val Ser Arg Asn Arg
                     85                    90                    95
Gln Pro Ile Pro Leu Leu Met Asn Lys Glu Asn Ser Thr Lys Thr Ser
                    100                   105                   110
Lys Val Glu Leu Thr Leu Ala Ser Pro Tyr Met Lys Gln Glu Lys Glu
                    115                   120                   125
Glu Glu Lys Glu Gly Phe Ser Glu Ser Asp Phe Ser Asp Gly Asn Thr
                    130                   135                   140
Ser Ser Asn Ala Glu Ser Trp Arg Asn Pro Ser Ser Ser Glu Glu Glu
145                   150                   155                   160
Pro Ser Pro Val Leu Lys Thr Leu Glu Arg Ser Ala Ala Arg Lys Met
                    165                   170                   175
Pro Ser Lys Ser Leu Glu Asp Ile Ser Ser Asp Ser Ser Asn Gln Ala
                    180                   185                   190
Lys Val Asp Asn Gln Pro Glu Glu Leu Val Arg Ser Ala Glu Asp Asp
                    195                   200                   205
Glu Lys Pro Asp Gln Lys Pro Val Thr Asn Glu Cys Val Pro Arg Ile
                    210                   215                   220
Ser Thr Val Pro Thr Gln Pro Asp Asn Pro Phe Ser His Pro Asp Lys
225                   230                   235                   240
Leu Lys Arg Met Ser Lys Ser Val Pro Ala Phe Leu Gln Asp Glu Val
                    245                   250                   255
Ser Gly Ser Val Met Ser Val Tyr Ser Gly Asp Phe Gly Asn Leu Glu
                    260                   265                   270
Val Lys Gly Asn Ile Gln Phe Ala Ile Glu Tyr Val Glu Ser Leu Lys
                    275                   280                   285
Glu Leu His Val Phe Val Ala Gln Cys Lys Asp Leu Ala Ala Val Asp
                    290                   295                   300
Val Lys Lys Gln Arg Ser Asp Pro Tyr Val Lys Ala Tyr Leu Leu Pro
305                   310                   315                   320
Asp Lys Gly Lys Met Gly Lys Lys Lys Thr Leu Val Val Lys Lys Thr
                    325                   330                   335
Leu Asn Pro Val Tyr Asn Glu Ile Leu Arg Tyr Lys Ile Glu Lys Gln
                    340                   345                   350
Ile Leu Lys Thr Gln Lys Leu Asn Leu Ser Ile Trp His Arg Asp Thr
```

```
        355              360              365
Phe Lys Arg Asn Ser Phe Leu Gly Glu Val Glu Leu Asp Leu Glu Thr
    370              375              380
Trp Asp Trp Asp Asn Lys Gln Asn Lys Gln Leu Arg Trp Tyr Pro Leu
385              390              395              400
Lys Arg Lys Thr Ala Pro Val Ala Leu Glu Ala Glu Asn Arg Gly Glu
                405              410              415
Met Lys Leu Ala Leu Gln Tyr Val Pro Glu Pro Val Pro Gly Lys Lys
            420              425              430
Leu Pro Thr Thr Gly Glu Val His Ile Trp Val Lys Glu Cys Leu Asp
            435              440              445
Leu Pro Leu Leu Arg Gly Ser His Leu Asn Ser Phe Val Lys Cys Thr
    450              455              460
Ile Leu Pro Asp Thr Ser Arg Lys Ser Arg Gln Lys Thr Arg Ala Val
465              470              475              480
Gly Lys Thr Thr Asn Pro Ile Phe Asn His Thr Met Val Tyr Asp Gly
                485              490              495
Phe Arg Pro Glu Asp Leu Met Glu Ala Cys Val Glu Leu Thr Val Trp
            500              505              510
Asp His Tyr Lys Leu Thr Asn Gln Phe Leu Gly Gly Leu Arg Ile Gly
            515              520              525
Phe Gly Thr Gly Lys Ser Tyr Gly Thr Glu Val Asp Trp Met Asp Ser
    530              535              540
Thr Ser Glu Glu Val Ala Leu Trp Glu Lys Met Val Asn Ser Pro Asn
545              550              555              560
Thr Trp Ile Glu Ala Thr Leu Pro Leu Arg Met Leu Leu Ile Ala Lys
                565              570              575
Ile Ser Lys
```

<400> 4980

```
Met Arg Ser Leu Leu Leu Leu Ser Ala Phe Cys Leu Leu Glu Ala Ala
1               5                   10                  15
Leu Ala Ala Glu Val Lys Lys Pro Ala Ala Ala Ala Ala Pro Gly Thr
            20                  25                  30
Ala Glu Lys Leu Ser Pro Lys Ala Ala Thr Leu Ala Glu Arg Ser Ala
            35                  40                  45
Gly Leu Ala Phe Ser Leu Tyr Gln Ala Met Ala Lys Asp Gln Ala Val
        50                  55                  60
Glu Asn Ile Leu Val Ser Pro Val Val Val Ala Ser Ser Leu Gly Leu
65                  70                  75                  80
Val Ser Leu Gly Gly Lys Ala Thr Thr Ala Ser Gln Ala Lys Ala Val
                85                  90                  95
Leu Ser Ala Glu Gln Leu Arg Asp Glu Glu Val His Ala Gly Leu Gly
            100                 105                 110
Glu Leu Leu Arg Ser Leu Ser Asn Ser Thr Ala Arg Asn Val Thr Trp
            115                 120                 125
Lys Leu Gly Ser Arg Leu Tyr Gly Pro Ser Ser Val Ser Phe Ala Asp
            130                 135                 140
Asp Phe Val Arg Ser Ser Lys Gln His Tyr Asn Cys Glu His Ser Lys
145                 150                 155                 160
Ile Asn Phe Arg Asp Lys Arg Ser Ala Leu Gln Ser Ile Asn Glu Trp
                165                 170                 175
Ala Ala Gln Thr Thr Asp Gly Lys Leu Pro Glu Val Thr Lys Asp Val
            180                 185                 190
Glu Arg Thr Asp Gly Ala Leu Leu Val Asn Ala Met Phe Phe Lys Arg
            195                 200                 205
Glu Ser Gly Ala Arg Ser Gly Val Leu Leu Leu Leu Pro Gly Pro Pro
            210                 215                 220
Ala Arg Val Arg Thr Thr Phe Arg Ala Leu His Ser Ser Leu Pro Leu
225                 230                 235                 240
Ile Tyr Ala Val Thr Thr Gln Gly Gly Arg Thr Val Thr Gln Leu Phe
                245                 250                 255
Val Gln Thr Gly Asn
                260
```

<210> 4981

<211> 281

<212> PRT

<213> Homo sapiens

<400> 4981

Met Ala Glu Ala Ala Pro Ala Arg Asp Pro Glu Thr Asp Lys His Thr
1   5   10   15

Glu Asp Gln Ser Pro Ser Thr Pro Leu Pro Gln Pro Ala Ala Glu Lys
                20   25   30

Asn Ser Tyr Leu Tyr Ser Thr Glu Ile Thr Leu Trp Thr Val Val Ala
            35   40   45

Ala Ile Gln Ala Leu Glu Lys Lys Val Asp Ser Cys Leu Thr Arg Leu
        50   55   60

Leu Thr Leu Glu Gly Arg Thr Gly Thr Ala Glu Lys Lys Leu Ala Asp
65   70   75   80

Cys Glu Lys Thr Ala Val Glu Phe Gly Asn Gln Leu Glu Gly Lys Trp
                85   90   95

Ala Val Leu Gly Thr Leu Leu Gln Glu Tyr Gly Leu Leu Gln Arg Arg
            100   105   110

Leu Glu Asn Val Glu Asn Leu Leu Arg Asn Arg Asn Phe Trp Ile Leu
            115   120   125

Arg Leu Pro Pro Gly Ser Lys Gly Glu Ala Pro Lys Val Pro Val Thr
        130   135   140

Phe Asp Asp Val Ala Val Tyr Phe Ser Glu Leu Glu Trp Gly Lys Leu
145   150   155   160

Glu Asp Trp Gln Lys Glu Leu Tyr Lys His Val Met Arg Gly Asn Tyr
                165   170   175

Glu Thr Leu Val Ser Leu Asp Tyr Ala Ile Ser Lys Pro Asp Ile Leu
            180   185   190

Thr Arg Ile Glu Arg Gly Glu Glu Pro Cys Leu Asp Arg Trp Gly Gln
            195   200   205

Glu Lys Gly Asn Glu Val Glu Val Gly Arg Pro Arg Met Met Gly Thr
        210   215   220

Gly Leu Pro Pro Tyr Pro Glu His Leu Thr Ser Pro Leu Ser Pro Ala

225   230   235   240
Gln Glu Glu Leu Lys Glu Gly Gln Ala Pro Lys Gln Gln Gln Asp Ser
                     245   250   255
Glu Ala Arg Val Ala Pro Ala Gly Pro Glu Ala Gly Leu Ala Leu Arg
                     260   265   270
Thr Asp Leu Gln Gly Glu Ala Gln Ile
                275   280

<210> 4982
<211> 126
<212> PRT
<213> Homo sapiens

<400> 4982
Met Ser Pro Pro Pro Leu Leu Phe Pro Gly Pro Ser His His His Val
  1   5   10   15
Ser Pro Gly Leu Leu His Ala Pro Pro Thr Trp Ser Pro His Phe Cys
                     20   25   30
Pro Gly Arg Gly Trp Cys Val Leu His Pro Ala Thr Gln Gln Ser Glu
                35   40   45
Gly Ser Ser Tyr Asn Ile Ser Gln Ile Thr Ser Leu Phe Ala Gln Asn
           50   55   60
Pro Ala Met Ala Pro Ile Ser Phe Arg Val Asn Ser Lys Ala Pro Tyr
 65   70   75   80
Leu Pro Thr Ala Pro His Ser Arg Thr Phe Pro Pro Val Val Leu Pro
                     85   90   95
Leu Val Pro Ser Ile Pro Ala Thr Gly Ile Ser Leu Leu Ala Pro Glu
                100   105   110
Leu Thr Arg Tyr Gly Ala Ala Ser Gly Pro Leu His Leu Gln
                115   120   125

<210> 4983
<211> 266
<212> PRT

<213> Homo sapiens

<400> 4983

```
Met Val Met Ala Asp Gln Asn Gln Val Trp Val Gly Ser Glu Asp Ser
 1               5                  10                  15

Val Ile Tyr Ile Ile Asn Val His Ser Met Ser Cys Asn Lys Gln Leu
                20                  25                  30

Thr Ala His Cys Ser Ser Val Thr Asp Leu Ile Val Gln Asp Gly Gln
            35                  40                  45

Glu Ala Pro Ser Asn Val Tyr Ser Cys Ser Met Asp Gly Met Val Leu
        50                  55                  60

Val Trp Asn Val Ser Thr Leu Gln Val Thr Ser Arg Phe Gln Leu Pro
65                  70                  75                  80

Arg Gly Gly Leu Thr Ser Ile Arg Leu His Gly Gly Arg Leu Trp Cys
                85                  90                  95

Cys Thr Gly Asn Ser Ile Met Val Met Lys Met Asn Gly Ser Leu His
            100                 105                 110

Gln Glu Leu Lys Ile Glu Glu Asn Phe Lys Asp Thr Ser Thr Ser Phe
        115                 120                 125

Leu Ala Phe Gln Leu Leu Pro Glu Glu Glu Gln Leu Trp Ala Ala Cys
    130                 135                 140

Ala Gly Arg Ser Glu Val Tyr Ile Trp Ser Leu Lys Asp Leu Ala Gln
145                 150                 155                 160

Pro Pro Gln Arg Val Pro Leu Glu Asp Cys Ser Glu Ile Asn Cys Met
                165                 170                 175

Ile Arg Val Lys Lys Gln Val Gly Trp Arg Ala Arg His Pro Gln His
                180                 185                 190

Pro Arg Gln Val Ser Leu Ala Leu Ala Ala Ser Pro Cys Ser Arg Glu
            195                 200                 205

Pro Ala Ala Arg Pro Arg Ala Leu Leu Pro Ser Pro Leu Arg Val Pro
        210                 215                 220

Leu Leu Thr Gly Thr Cys Arg Val Gly Ala Asn Gly Pro Thr Gly His
225                 230                 235                 240

His Val Leu Val Ser Trp Cys Gly Pro Ser Thr Pro Gln Arg Ile Pro
                245                 250                 255
```

Pro Asn Trp Met Ala Ser Asn Asp Arg Thr
            260   265

<210> 4984

<211> 251
<212> PRT
<213> Homo sapiens

<400> 4984
Met Gly Met Gly Thr Leu Ala Trp Gly Gln Pro Leu Leu Pro Arg Cys
  1   5   10   15
Leu Cys Pro Arg Ala Gly Gln Arg Gln Pro Val Val Thr Ala Ala Val
            20   25   30
Ala Ala Pro Gln Leu Thr Met Asn Asp Phe Ser Val His Arg Ile Ile
            35   40   45
Gly Arg Gly Gly Phe Gly Glu Val Tyr Gly Cys Arg Lys Ala Asp Thr
        50   55   60
Gly Lys Met Tyr Ala Met Lys Cys Leu Asp Lys Lys Arg Ile Lys Met
 65   70   75   80
Lys Gln Gly Glu Thr Leu Ala Leu Asn Glu Arg Ile Met Leu Ser Leu
                85   90   95
Val Ser Thr Gly Asp Cys Pro Phe Ile Val Cys Met Ser Tyr Ala Phe
            100   105   110
His Thr Pro Asp Lys Leu Ser Phe Ile Leu Asp Leu Met Asn Gly Gly
            115   120   125
Asp Leu His Tyr His Leu Ser Gln His Gly Val Phe Ser Glu Ala Asp
        130   135   140
Met Arg Phe Tyr Ala Ala Glu Ile Ile Leu Gly Leu Glu His Met His
145   150   155   160
Asn Arg Phe Val Val Tyr Arg Asp Leu Lys Val Ser Ala Pro Ala Val
            165   170   175
Pro Arg Leu Asp Leu Arg Gly Cys Pro Leu Leu Pro Leu Asp Ile Pro
            180   185   190
Ala Thr Arg Pro Arg Gly Val Gly Leu Leu Gly His Gly Arg Pro Val

```
         195                 200                 205
Ser Ser His Leu Arg Pro Cys Pro Ser His Arg Ala Thr Leu Trp Val
    210                 215                 220
Gln Val Val Ala Gly Asp Arg Arg Glu Asp Pro His Leu Cys Pro Phe
225                 230                 235                 240
Phe Gly Tyr Pro Ser Ser Ser Pro Val Lys Gln
                245                 250
```

<210> 4985

<211> 350

<212> PRT

<213> Homo sapiens

<400> 4985

```
Met Met Glu Ser Ser Glu Leu Thr Pro Lys Gln Glu Ile Phe Lys Gly
 1               5                  10                  15
Ser Glu Ser Ser Asn Ser Thr Ser Gly Gly Leu Phe Gly Val Val Pro
                20                  25                  30
Gly Gly Thr Glu Thr Gly Asp Val Cys Glu Asp Thr Phe Lys Glu Leu
            35                  40                  45
Glu Gly Gln Pro Ser Asn Glu Glu Gly Ser Arg Leu Glu Ser Asp Phe
        50                  55                  60
Leu Glu Ile Ile Asp Glu Asp Lys Lys Lys Ser Thr Lys Asp Arg Tyr
65                  70                  75                  80
Glu Glu Tyr Lys Glu Val Glu Glu His Pro Pro Leu Ser Ser Ser Pro
                85                  90                  95
Val Glu His Glu Gly Val Leu Lys Gly Gln Lys Ser Tyr Arg Cys Asp
            100                 105                 110
Glu Cys Gly Lys Ala Phe Tyr Trp Ser Ser His Leu Ile Gly His Arg
        115                 120                 125
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys
        130                 135                 140
Thr Phe Arg Gln Thr Ser Gln Leu Ile Val His Leu Arg Thr His Thr
145                 150                 155                 160
Gly Glu Lys Pro Tyr Glu Cys Ser Glu Cys Gly Lys Ala Tyr Arg His
```

```
                    165                  170                  175
Ser Ser His Leu Ile Gln His Gln Arg Leu His Asn Gly Glu Lys Pro
            180                  185                  190
Tyr Lys Cys Asn Glu Cys Ala Lys Ala Phe Asn Gln Ser Ser Lys Leu
            195                  200                  205
Phe Asp His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Lys
    210                  215                  220
Glu Cys Gly Ala Ala Phe Ser Arg Ser Lys Asn Leu Val Arg His Gln
225                  230                  235                  240
Phe Leu His Thr Gly Lys Lys Pro Tyr Lys Cys Asn Glu Cys Gly Arg
                245                  250                  255
Ala Phe Cys Ser Asn Arg Asn Leu Ile Asp His Gln Arg Thr His Thr
            260                  265                  270
Gly Glu Lys Pro Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ser Arg
            275                  280                  285
Ser Lys Cys Leu Ile Arg His Gln Ser Leu His Thr Gly Glu Lys Pro
    290                  295                  300
Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Asn Gln Ile Ser Gln Leu
305                  310                  315                  320
Val Glu His Glu Arg Ile His Thr Gly Glu Lys Pro Phe Lys Cys Ser
                325                  330                  335
Glu Cys Gly Lys Ala Phe Gly Leu Ser Lys Cys Leu Ile Arg
            340                  345                  350
```

<210> 4986

<211> 191

<212> PRT

<213> Homo sapiens

<400> 4986

```
Met Tyr Ala Lys Arg Pro Glu Ser Phe Ser Cys Lys Lys Leu Ala Met
1                   5                   10                  15
Ser Lys Lys Val Thr Pro Ala Ser Thr Gln Cys Val Arg Phe Pro Phe
            20                  25                  30
Pro Ser Thr Val Val Cys Lys Lys Asn Leu Asp Ser Thr Thr Val Ala
```

```
              35                    40                    45
Val His Gly Glu Glu Ile Tyr Cys Lys Ser Cys Tyr Gly Lys Lys Tyr
         50                    55                    60
Gly Pro Lys Gly Tyr Gly Tyr Gly Gln Gly Ala Gly Thr Leu Ser Thr
65                    70                    75                    80
Asp Lys Gly Glu Ser Leu Gly Ile Lys His Glu Glu Ala Pro Gly His
                   85                    90                    95
Arg Pro Thr Thr Asn Pro Asn Ala Ser Lys Phe Ala Gln Lys Ile Gly
                  100                   105                   110
Gly Ser Glu Arg Cys Pro Arg Cys Ser Gln Ala Val Tyr Ala Ala Glu
              115                   120                   125
Lys Val Ile Gly Ala Gly Lys Ser Trp His Lys Ala Cys Phe Arg Cys
         130                   135                   140
Ala Lys Cys Gly Lys Gly Leu Glu Ser Thr Thr Leu Ala Asp Lys Asp
145                   150                   155                   160
Gly Glu Ile Tyr Cys Lys Gly Cys Tyr Ala Lys Asn Phe Gly Pro Lys
                  165                   170                   175
Gly Phe Gly Phe Gly Gln Gly Ala Gly Ala Leu Val His Ser Glu
              180                   185                   190


<210> 4987
<211> 482
<212> PRT
<213> Homo sapiens

<400> 4987
Met Trp Thr Val Pro Ser Phe Thr Asn Asp Ser Tyr Gln Val Tyr Asn
1                     5                    10                    15
Val Phe Ser Thr Asn Ser Phe Gln Leu Leu Thr Val Lys Arg Thr Pro
                   20                    25                    30
His Glu Ala Trp Arg Val Pro Leu Thr Thr Lys Thr Asn Lys Thr Lys
              35                    40                    45
Gly Leu Pro Asp Cys Pro Lys Lys Pro Thr Asn Gly Pro Phe Ile Val
         50                    55                    60
Thr Ser Ile Leu Trp Asp Asn Cys Asn Ala Pro Lys Ala Val Val Leu
```

```
      65                    70                    75                    80
Gln Thr Leu Ala Met Gly Ile Val Ile Asp Trp Ala Pro Lys Gly His
                        85                    90                    95
Tyr Trp Gln Asp Cys Ser Ser Lys Asn Thr Leu Cys Ser Glu Phe Ile
                   100                   105                   110
Tyr Ser Leu Asp Tyr Ile Glu His Gly Trp Gln Ser Tyr Thr Met Arg
              115                   120                   125
Gln Arg Val Ser Pro Tyr Pro Phe Lys Trp Met Asp Thr Gly Ile Ala
         130                   135                   140
Pro Pro Arg Pro Lys Ile Ile His Pro Phe Phe Thr Pro Glu His Pro
145                   150                   155                   160
Glu Leu Trp Lys Leu Ala Ala Ala Leu Ser Gly Ile Lys Ile Trp Asn
                   165                   170                   175
Thr Thr Tyr Gln Leu Leu Arg Thr Lys Thr Lys Thr Pro Thr Phe Asn
                   180                   185                   190
Ile Thr Leu Ile Ser Glu Trp Val Ile Pro Ile Arg Ser Cys Val Lys
              195                   200                   205
Pro Pro Tyr Met Leu Leu Val Gly Asn Ile Ile Met Met Pro Asp Ala
         210                   215                   220
Gln Thr Ile Glu Cys His Asn Cys Lys Leu Phe Thr Cys Ile Asp Ala
225                   230                   235                   240
Thr Phe Asn Pro Thr Thr Ser Ile Leu Leu Val Arg Ala Arg Glu Gly
                   245                   250                   255
Val Trp Ile Pro Val Ser Leu His Arg Pro Trp Glu Ser Ser Pro Ser
                   260                   265                   270
Ile His Ile Val Asn Glu Val Leu Lys Asp Ile Leu Lys Arg Thr Lys
              275                   280                   285
Arg Phe Ile Phe Thr Leu Ile Ala Val Leu Ala Gly Leu Leu Ala Val
              290                   295                   300
Thr Ala Thr Ala Ala Thr Ala Gly Val Ala Ile Arg Ser Ser Val Gln
305                   310                   315                   320
Thr Ala His Tyr Val Glu Ala Cys Gln Lys Asn Ser Ser Arg Leu Trp
                   325                   330                   335
Asn Ser Gln Ala Gln Ile Asp Gln Lys Leu Ala Asn Gln Ile Asn Asp
                   340                   345                   350
Leu Arg Gln Ser Val Thr Trp Leu Gly Asp Arg Val Met Asn Leu Gln
```

```
          355                 360                 365
His Arg Met Gln Leu Gln Cys Asp Trp Asn Thr Ser Asp Tyr Cys Ile
          370                 375                 380
Thr Pro Tyr Ala Tyr Asn Gln Asp Gln His Ser Trp Glu Asn Val Ser
385                 390                 395                 400
Arg His Leu Lys Ala Trp Asp Asp Asn Leu Thr Leu Asp Ile Ser Gln
                    405                 410                 415
Leu Lys Glu Gln Ile Phe Glu Ala Ser Gln Val His Leu Ser Thr Val
                    420                 425                 430
Pro Gly Ser His Ile Phe Glu Gly Ile Thr Lys Gln Leu Pro Asp Phe
                    435                 440                 445
Asn Pro Phe Lys Trp Leu Lys Pro Val Arg Gly Ser Leu Leu Leu Leu
          450                 455                 460
Ala Leu Leu Ile Leu Val Cys Leu Cys Cys Leu Leu Leu Val Cys Arg
465                 470                 475                 480
Cys Leu
```

```
<210> 4988
<211> 465
<212> PRT
<213> Homo sapiens
```

```
<400> 4988
Met Ala Ser Val Cys Cys Leu Pro Pro Pro Arg Ala Thr Trp Ala Ser
 1               5                  10                  15
Trp Thr Arg Cys Pro Gly Cys Thr Thr Cys Trp Leu Ala Pro Thr Pro
                20                  25                  30
Pro Arg Cys Trp Pro Ser Pro Trp Ser Arg Gly Gly Asp Ser Trp Pro
          35                  40                  45
Pro Cys Pro Arg Thr Val Pro Ser Ala Ser Gly Ala Trp Pro Pro Cys
          50                  55                  60
Asn Ser Ser Gly Ala Val Arg Ser Phe Ser Leu Glu Ala Ala Glu Val
65                  70                  75                  80
Leu Val Glu His Thr Cys His Arg Gly Ala Val Thr Gly Leu Thr Ala
```

```
                      85                      90                      95
Thr Pro Asp Gly Arg Leu Leu Phe Ser Ser Cys Ser Gln Gly Ser Leu
                100                     105                     110
Ala Gln Tyr Ser Cys Ala Asp Pro Gln Trp His Val Leu Arg Val Ala
                115                     120                     125
Ala Asp Met Val Cys Pro Asp Ala Pro Ala Ser Pro Ser Ala Leu Ala
            130                     135                     140
Val Ser Arg Asp Gly Arg Leu Leu Ala Phe Val Gly Pro Ser Arg Cys
145                     150                     155                     160
Thr Val Thr Val Met Gly Ser Ala Ser Leu Asp Glu Leu Leu Arg Val
                    165                     170                     175
Asp Ile Gly Thr Leu Asp Leu Ala Ser Ser Arg Leu Asp Ser Ala Met
                180                     185                     190
Ala Val Cys Phe Gly Pro Ala Ala Leu Gly Gln Leu Leu Val Ser Thr
                195                     200                     205
Ser Ser Asn Arg Val Val Val Leu Asp Ala Val Ser Gly Arg Ile Ile
            210                   215                     220
Arg Glu Leu Pro Gly Val His Pro Glu Pro Cys Pro Ser Leu Thr Leu
225                     230                     235                     240
Ser Glu Asp Ala Arg Phe Leu Leu Ile Ala Ala Gly Arg Thr Ile Lys
                    245                     250                     255
Val Trp Asp Tyr Ala Thr Gln Ala Ser Pro Gly Pro Gln Val Tyr Ile
                260                     265                     270
Gly His Ser Glu Pro Val Gln Ala Val Ala Phe Ser Pro Asp Gln Gln
                275                     280                     285
Gln Val Leu Ser Ala Gly Asp Ala Val Phe Leu Trp Asp Val Leu Ala
            290                     295                     300
Thr Thr Glu Ser Asp Gln Ser Phe Pro Gly Ala Pro Pro Ala Cys Lys
305                     310                     315                     320
Thr Gly Pro Gly Ala Gly Pro Leu Glu Asp Ala Ala Ser Arg Ala Ser
                    325                     330                     335
Glu Leu Pro Arg Gln Gln Val Pro Lys Pro Cys Gln Ala Ser Pro Pro
                340                     345                     350
Arg Leu Gly Val Cys Ala Arg Pro Pro Glu Gly Gly Asp Gly Ala Arg
                355                     360                     365
Asp Thr Arg Asn Ser Gly Ala Pro Arg Thr Thr Tyr Leu Ala Ser Cys
```

```
      370                 375                 380
Lys Ala Phe Thr Leu Ala Arg Val Ser Cys Ser Pro His Ser Ala Lys
385                 390                 395                 400
Gly Thr Cys Pro Pro Pro Ala Ser Gly Gly Trp Leu Arg Leu Lys Ala
                405                 410                 415
Val Val Gly Tyr Ser Gly Asn Gly Arg Ala Asn Met Val Trp Arg Pro
                420                 425                 430
Asp Thr Gly Gly Gly Gln Glu Pro Thr Pro Thr Pro Ser Gln Asp Ala
                435                 440                 445
Ala Ala Arg Gly Pro Ala Val Ser Thr Pro Arg Pro Gly Pro Gly Gly
                450                 455                 460
Lys
465
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<210> 4989

<211> 134

<212> PRT

<213> Homo sapiens

<400> 4989

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Met Gly Lys Lys Gln Ser Arg Lys Thr Gly Asn Ser Lys Lys Gln Ser
 1                   5                  10                  15
Ala Ser Pro Pro Pro Lys Glu Cys Ser Ser Ser Pro Ala Thr Glu Gln
                20                  25                  30
Ser Trp Met Glu Asn Asp Phe Asp Glu Leu Arg Glu Ala Gly Phe Arg
                35                  40                  45
Arg Ser Asn Tyr Ser Glu Leu Arg Glu Asp Ile Gln Thr Lys Gly Lys
        50                  55                  60
Lys Val Glu Asn Phe Glu Lys Asn Leu Glu Glu Cys Ile Thr Arg Ile
65                  70                  75                  80
Thr Asn Thr Glu Lys Cys Leu Lys Glu Leu Met Glu Leu Lys Thr Lys
                85                  90                  95
Ala Arg Glu Leu Arg Glu Glu Cys Arg Ser Leu Arg Ser Arg Cys Asp
                100                 105                 110
Gln Leu Glu Glu Arg Val Ser Ala Met Glu Asp Glu Met Asn Glu Met
```

```
                115                    120                    125
Lys Gln Glu Gly Lys Val
        130


<210>   4990
<211>   589
<212>   PRT
<213>   Homo sapiens


<400>   4990
Met Asn Asn Arg Lys Glu Asp Met Glu Ile Thr Ser His Tyr Arg His
1                   5                   10                  15
Leu Leu Arg Glu Leu Asn Glu Gln Arg Gln His Gly Val Leu Cys Asp
                20                  25                  30
Val Cys Val Val Val Glu Gly Lys Val Phe Lys Ala His Lys Asn Val
                35                  40                  45
Leu Leu Gly Ser Ser Arg Tyr Phe Lys Thr Leu Tyr Cys Gln Val Gln
            50                  55                  60
Lys Thr Ser Glu Gln Ala Thr Val Thr His Leu Asp Ile Val Thr Ala
65                  70                  75                  80
Gln Gly Phe Lys Ala Ile Ile Asp Phe Met Tyr Ser Ala His Leu Ala
                85                  90                  95
Leu Thr Ser Arg Asn Val Ile Glu Val Met Ser Ala Ala Ser Phe Leu
                100                 105                 110
Gln Met Thr Asp Ile Val Gln Ala Cys His Asp Phe Ile Lys Ala Ala
                115                 120                 125
Leu Asp Ile Ser Ile Lys Ser Asp Ala Ser Asp Glu Leu Ala Glu Phe
            130                 135                 140
Glu Ile Gly Ala Ser Ser Ser Ser Thr Glu Ala Leu Ile Ser Ala
145                 150                 155                 160
Val Met Ala Gly Arg Ser Ile Ser Pro Trp Leu Ala Arg Arg Thr Ser
                165                 170                 175
Pro Ala Asp Ser Ser Gly Asp Ser Ala Ile Ala Ser Cys His Asp Gly
                180                 185                 190
Gly Ser Ser Tyr Gly Lys Glu Asp Gln Glu Pro Lys Ala Asp Gly Pro
```

```
                    195                    200                    205
Asp Asp Val Ser Ser Gln Pro Leu Trp Pro Gly Asp Val Gly Tyr Gly
        210                    215                    220
Pro Leu Arg Ile Lys Glu Glu Gln Val Ser Pro Ser Gln Tyr Gly Gly
225                    230                    235                    240
Ser Glu Leu Pro Ser Ala Lys Asp Gly Ala Val Gln Asn Ser Phe Ser
                    245                    250                    255
Glu Gln Ser Ala Gly Asp Ala Trp Gln Pro Thr Gly Arg Arg Lys Asn
                    260                    265                    270
Arg Lys Asn Lys Glu Thr Val Arg His Ile Thr Gln Gln Val Glu Asp
                    275                    280                    285
Asp Ser Arg Ala Ser Ser Pro Val Pro Ser Phe Leu Pro Thr Ser Gly
        290                    295                    300
Trp Pro Phe Ser Ser Arg Asp Ser Asn Ala Asp Leu Ser Val Thr Glu
305                    310                    315                    320
Ala Ser Ser Ser Asp Ser Arg Gly Glu Arg Ala Glu Leu Tyr Ala Gln
                    325                    330                    335
Val Glu Glu Gly Leu Leu Gly Gly Glu Ala Ser Tyr Leu Gly Pro Pro
                    340                    345                    350
Leu Thr Pro Glu Lys Asp Asp Ala Leu His Gln Ala Thr Ala Val Ala
        355                    360                    365
Asn Leu Arg Ala Ala Leu Met Ser Lys Asn Ser Leu Leu Ser Leu Lys
        370                    375                    380
Ala Asp Val Leu Gly Asp Asp Gly Ser Leu Leu Phe Glu Tyr Leu Pro
385                    390                        395                    400
Arg Gly Ala His Ser Leu Ser Leu Asn Glu Phe Thr Val Ile Arg Lys
                    405                    410                    415
Lys Phe Lys Cys Pro Tyr Cys Ser Phe Ser Ala Met His Gln Cys Ile
                    420                    425                    430
Leu Lys Arg His Met Arg Ser His Thr Gly Glu Arg Pro Tyr Pro Cys
        435                    440                    445
Glu Ile Cys Gly Lys Lys Phe Thr Arg Arg Glu His Met Lys Arg His
        450                    455                    460
Thr Leu Val His Ser Lys Asp Lys Lys Tyr Val Cys Lys Val Cys Ser
465                    470                    475                    480
Arg Val Phe Met Ser Ala Ala Ser Val Gly Ile Arg His Gly Ser Arg
```

```
                 485                 490                 495
Arg His Gly Val Cys Thr Asp Cys Ala Gly Arg Gly Met Ala Gly Pro
             500                 505                 510
Leu Asp His Gly Gly Gly Gly Gly Glu Gly Ser Pro Glu Ala Leu Phe
         515                 520                 525
Pro Gly Asp Gly Pro Tyr Leu Glu Asp Pro Glu Asp Pro Arg Gly Glu
         530                 535                 540
Ala Glu Glu Leu Gly Glu Asp Asp Glu Gly Leu Ala Pro Glu Asp Ala
545                 550                 555                 560
Leu Leu Ala Asp Asp Lys Asp Glu Glu Asp Ser Pro Arg Pro Arg Ser
             565                 570                 575
Pro Pro Gly Gly Pro Asp Lys Asp Phe Ala Trp Leu Ser
             580                 585
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<210> 4991
<211> 30
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: an artificially
synthesized oligo-cap linker sequence

<400> 4991
agcaucgagu cggccuuguu ggccuacugg 30

<210> 4992
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: an artificially
synthesized oligo(dT) primer sequence

<400> 4992

gcggctgaag acggcctatg tggccttttt tttttttttt tt 42

<210> 4993

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: an artificially
synthesized primer sequence

<400> 4993

agcatcgagt cggccttgtt g 21

<210> 4994

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: an artificially
synthesized primer sequence

<400> 4994

gcggctgaag acggcctatg t 21